THE ROLE AND IMPORTANCE

of

PHILIPPINE INTERISLAND SHIPPING AND TRADE

by

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FOREWORD

Professor Frederick L. Wernstedt, Department of Geography, Pennsylvania State University, was supported by the United States Educational (Fulbright) Foundation in the Philippines and the Social Science Research Council during 1951-52, when he conducted field research in the Philippines leading to his doctoral dissertation, Agricultural Regionalism on Negros Island, Philippines. Professor Wernstedt, supported by a grant from the Office of Naval Research, United States Navy, returned to the Philippines during the summer months of 1954 and 1955 to study postwar problems of Philippine interisland commerce.

The present study of the role and importance of Philippine interisland shipping and trade was published for limited distribution by the Office of Naval Research in March, 1957. The Cornell Southeast Asia Program in accordance with its policy of providing materials on Southeast Asia which are not easily obtainable decided to issue Professor Wernstedt's study in the Cornell Southeast Asia Program series of Data Papers.

Professor Wernstedt concludes, as a result of his study of interisland shipping and trade, that "transportation services performed by the interisland shipping fleet are barely adequate for maintenance of Philippine interisland commerce." Analysis strongly supports the belief that the present situation is largely attributable to two related factors. First, "unwholesome and chaotic competition" has resulted in concentration of shipping services in a few ports and the relative neglect of ports which serve hinterlands suitable for economic development. Second, the vast bulk of the present Philippine interisland fleet is of World War II origin. Such shipping was constructed for military purposes and is poorly adapted for commercial operations.

The Philippine economy is burdened with a merchant fleet which is slow, costly to operate and rapidly approaching obsolescence. Professor Wernstedt concludes his study with perceptive recommendations for the improvement of Philippine interisland transportation.

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Introduction:

Most geographers recognize that the study of transportation and trade connections between various areas is an important aspect in the analysis of interspatial relationships. Yet, in spite of the general acceptance of the value of such studies, several important aspects of the problem have scarcely been touched. Workers in the fields of transportation geography have been forced to neglect many fruitful areas of study largely owing to the lack of available data. This paucity in basic data is being rectified gradually as governmental agencies and businesses assemble and release more detailed statistics. With the release of new data the transportation geographer has been able to extend his research, first to studies of international transportation and commerce and finally (and only comparatively recently) to analyses of internal communications. In recent decades in both America and Europe geographical attention has focused toward studies of individual ports, analyses of rail, air and highway communications and to the traffic on inland waterways, e.g., rivers, canals and lakes. However, one major facet of internal transportation remains unprobed -- the role and importance of water transport in an insular State.

Domestic communications in an archipelagic nation pose problems that differ from those for contiguous land mass nations. Whereas an effective and efficient overland transportation network must connect the various ports with their contiguous hinterlands in an archipelago, the major dependence must be, perforce, upon water transport. The present study concerns itself with an analysis of maritime transportation and trade in the Republic of the Philippines, an insular nation whose basic transportation system takes the form of an interisland fleet.

Three fundamental objectives influenced the selection for study of Philippine interisland shipping and trade.

1). The Philippine Islands offered an excellent example for an analysis of archipelagic water communications. It was felt that both governmental and private interests in the Philippines would cooperate since the investigation would constitute a pioneer study of immediate concern. Furthermore, the principal investigator would require a minimum of familarization time owing to his previous research in the Philippines.

2). In view of the complete absence of any previous studies by individuals, companies or governmental agencies, an objective and disinterested analysis of Philippine interisland shipping and trade could serve as a yardstick againste which future, more detailed, surveys could be compared. In the meanwhile it would serve as an iterim report.*

3). Future studies of similar archipelagic communications in other areas might be stimulated by providing a basic framework for reference. These studies might be forthcoming by the author or other individuals.

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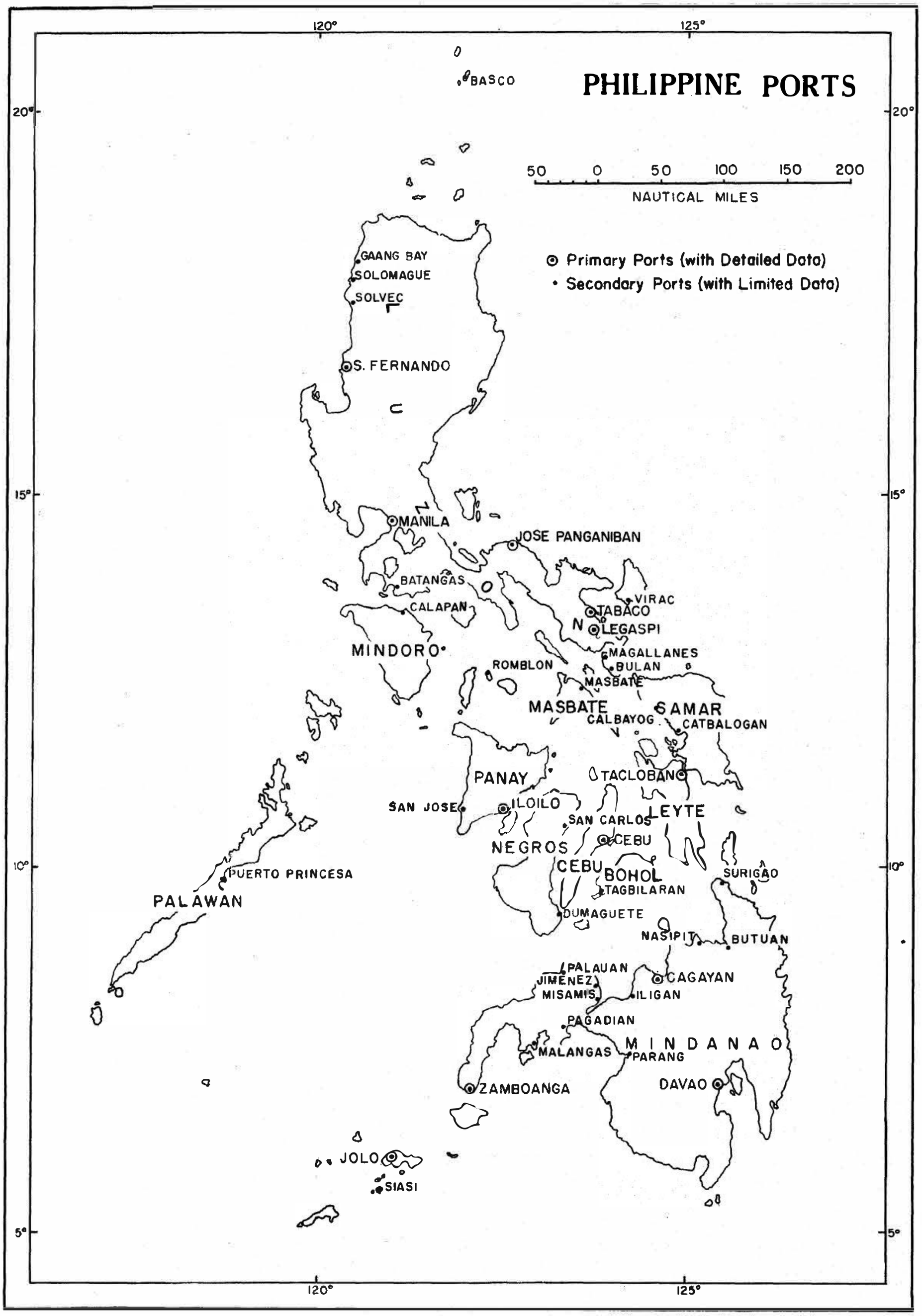
*Subsequent to field investigations in theePhilippines the United States Overseas Mission, International Cooperation Administration through the Stanford Research Institute inauguratedea detailed survey of all phases of Philippine transportation.

Investigation of the role and importance of Philippine interisland shipping and trade proceeded along two lines. First, geographical and historical materials were collected and analyzed so as to give the basic foundations for the present-day patterns of shipping and trade. Secondly, statistical information was gathered, assembled, tabulated and analyzed in order to portray the present-day patterns. Only then was a basic regional synthesis attempted, one which could outline the trade regions of the Philippines. The analysis of basic trade regionalisms in the Philippines represents the core of the project.

Historical and geographical materials were unearthed in various libraries, principally the Library of Congress. The acquisition of statistical data, however, presented a most serious problem. There had been no attempts to assemble data on Philippine domestic trade, either in the United States or in the Philippines. Fortunately, Philippine government regulation made compulsory the filings of incoming and outgoing coastwise manifests by interisland vessels at each Customs-staffed port, of which there are twelve. The continuity of the manifests had been broken, and previous manifests destroyed, by World War II. However, available postwar manifests represented a storehouse of unassembled information on present-day operations of interisland shipping. Although the accuracy of quantities as stated on the manifests was subject to serious misgivings (they were frequently understated), the manifests gave a qualitative basis for the plotting and subsequent analysis of shipping and trade patterns. By 1953, the Philippine economy had returned to approximate normalcy. Three then-current months were selected as representative trade months and data assembled from the inbound and outbound manifests filed during those months. The months of October, 1953 (a major crop harvesting month), January, 1954 (an iterim crop month) and a split month, May 16, 1954 to June 15, 1954 (a major crop planting month) were selected as representative of annual traffic. Yearly quantities were predicated on the basis of these three months, multiplied by four. Thousands of manifests were consulted, and the data secured from them constitute the basis for this survey. The reader is cautioned that quantitative figures are unreliable and probably consistently understate values by 20-25%. However, the basic flow patterns are true.

Interisland shipping and trade is of vital concern to businesses and the government of the Philippines. Field work would have been an impossibility were it not for the cooperation extended by various individuals and agencies. The two Commissioners of Customs, the Honorable Edilberto Y. David and the Honorable Manuel P. Manahan, gave the author their cooperation and that of their staffs. Personnel of the United States Foreign Operations Administration in Manila, officials of the United States Embassy, particularly the Naval Attache', Captain Vernon Williams, were extremely generous in their help. Rear Admiral Hugh H. Goodwin, Commandant, United States Naval Forces in the Philippines, and his staff gave very welcome assistance. Greatest appreciation is acknowledged to the Geography Branch of the Office of Naval Research for their moral and financial sponsorship of the project. Numerous Filipinos, businessmen, shipping company officials, Customs Service personnel and others gave their complete cooperation.

To them all I extend my grateful thanks.



Map 1: Philippine Ports (Ports of Entry and National Ports) for which some data are available.

The Geographical Bases for Philippine Interisland Shipping and Trade:

The Republic of the Philippines is composed of 7,100 islands, ranging in size from rocks awash only at low tide up to an island that is approximately the size of the State of Ohio. Of the total number of islands which comprise the Archipelago approximately one thousand support some form of permanent human occupance. Varying climatic and edaphic conditions, differing degrees of land capability and an extreme unevenness in population density from island to island, and even within single islands, give to the Philippines a marked diversity of landscape. Essentially homogeneous human wants coupled to great areal diversity in production centers in the Philippines have led to insistent demands for an efficient interisland transportation system which will link effectively the various production and consumption centers. In an archipelago such as the Philippines water transport is the only practical means of providing for this demand.

The Philippine Archipelago lies only a short distance southeast of the mainland of the continent of Asia, separated from it by the South China Sea. The Philippines, stretching in a broad northeast-southwest-trending arc between latitudes 5° and 21° North, lies wholly within the zone of tropical temperatures. Temperatures are remarkably similar throughout the Archipelago (see Table I) providing year-round growing conditions, temperaturewise.

Table I: Average Monthly Temperatures for Selected Philippine Stations (degrees F.).*

Basco, Batanes: (20°28'N., 122°00'E.)												
Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
72.4	72.5	75.4	79.2	81.5	83.4	82.7	82.2	81.5	79.9	76.7	73.4	78.5°

Zamboanga City (6°55'N., 122°05'E.)												
79.5	79.4	79.7	80.2	80.4	79.9	79.7	79.7	79.7	79.7	79.9	79.9	79.7°

Baguio City (16°25'N., 120°35'E., elev. 5000')												
61.7	61.9	63.9	65.5	66.0	66.0	64.5	64.2	64.4	64.4	63.9	63.4	64.2°

* Philippine Weather Bureau

Only in the highlands are cooler temperatures encountered. Precipitation (rainfall) amounts and regimes, however, vary widely throughout the Islands. Average annual precipitations range from areas receiving less than 40 inches (Dadiangas) to those receiving more than 170 inches (Baguio). Regimes of precipitation vary from areas receiving summer maximums to those with winter concentrations. There are also stations which experience no drought periods, and there are stations which undergo severe and prolonged droughts (see Table II).

Table II: Average Monthly Precipitations for Selected Philippine Stations (in inches).*

Dadiangas, Cotabato (6°5'N., 125°10'E.)												
Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
2.0	2.5	3.2	2.2	4.3	4.7	3.6	4.5	3.4	3.8	3.2	2.7	39.9"

Baguio City (16°25'N., 120°35'E. elev. 5,000')												
0.9	0.8	1.9	4.7	15.5	16.9	41.9	44.7	27.4	15.1	5.0	2.0	176.7"

Surigao, Surigao (9°45'N., 125°30'E.)												
22.1	15.4	14.0	10.2	6.4	4.8	6.8	5.1	6.6	11.0	16.8	24.5	143.7"

Subic, Zambales (14°50'N., 120°15'E.)												
0.2	0.2	0.1	1.1	12.9	20.6	38.8	35.6	27.0	9.9	4.6	1.7	152.8"

* Philippine Weather Bureau

Because the bulk of agriculture is conducted without the benefits of irrigation and, hence, largely at the mercies of weather vagaries, productions of crops in the Philippines are strongly localized in certain more favored regions, i.e., more favored for specific individual crops. With essentially homogeneous living requirements throughout the nation, cheap, efficient and effective distribution becomes mandatory for national economic survival.

The Islands and Their Trade Areas:

Nine of the Philippine Islands, the islands of Luzon, Mindanao, Samar, Negros, Palawan, Panay, Leyte, Cebu and Bohol, contain 88 per cent of the total land surface of the Archipelago (see Map 1)t These nine islands support 95 per cent of the national population and supply the overwhelming bulk of the domestically produced commodities.

Luzon is the largest island of the Philippine Group, embracing a land area of 40,420 square miles.[1] On the island of Luzon lives slightly less than one-half of the total population of the Archipelago.[2] Five important trade-originating and/or trade-terminating areas are found on Luzon, i.e., urban Manila, the Cagayan Valley, the Central Plains and southwestern and southeastern Luzon. With the partial exception of the Manila urban area, the trade areas of Luzon depend upon overland transport for communications rather than overwater. The government-owned and operated Manila Railroad Company, with its 702 miles of mainline track, serves the Central Plains region and southwestern and southeastern Luzon. Modern highways parallel existing rail lines in most sections and strongly compete for freight and passengers. The Cagayan Valley of northern Luzon is connected by highways to Manila and there is talk of an extension of the railroad into the valley.

The Manila trade center differs from its four Luzon trade counterparts in that it functions as the principal entrepot for the entire nation. Through the commodious harbor of Manila passes the vast majority of Philippine imports (85%), a large portion of Philippine exports and large quantities of outbound, domestically manufactured goods, and inbound, domestically produced foodstuffs. Manila places rather strong reliance upon waterttransport because of the interisland character of much of its trade and trade hinterland.

The large southern island of Mindanao, although only slightly smaller than Luzon, i.e., 36,906 square miles, supports a much smaller population at present. Approximately fifteen per cent of the total population of the Philippine Islands reside on the island of Mindanao. Although relatively lightly occupied, Mindanao serves as the chief source of surplus foodstuffs and is an important producer of exportable products for the Philippines, owing to the presence of extensive and productive agricultural lands.

There are three major food surplus regions on Mindanao, i.e., northern, southern and southeastern Mindanao, each region supplying foodstuffs to Luzon, chiefly Manila, and to the populous central Visayan Islands. Since the markets for

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[1]The source used for all insular areas is: Republic of the Philippines, Bureau of Coast and Geodetic Survey, Philippine Coast Pilot, I, Manila: Bureau of Printing, 4th ed., 1953. 663 pp.

[2]Population data are taken from: Bureau of Census and Statistics, 1948 Census of the Philippines: Population Classified by Province, by City, Municipality, and Municipality, and Municipal District, and by Barrio, Manila: Bureau of Printing, 1951. 258 pp.

Mindanao-produced products are characteristically archipelago-wide, dependence must be, perforce, upon water transport.l The bulk of Mindanao's intra-island communications also must be by water transport since overland communication facilities are completely inadequatel

The islands of Panay, Negros, Cebu, Bohol,l Leyte and Samar constitute the larger and more important islands of the Visayan Group.l These islands are largely the sites of specialty crop productions, hence functioning as important originators of interisland or overseas commerce, or they are centers of dense populations, thereby requiring commodities from other islands or from overseas for internal subsistence.

The westernmost Visayan island is Panay, with a land area of 4,448 square miles. Panay is a relatively populous island (1948 population:l 1,491,000 persons), and on it are produced significant surpluses of rice and sugar, and from the adjacent waters of the Visayan Sea come large quantities of fish. Panay supplies large amounts of rice and fish to the rest of thelArchipelago, exports sugar to world markets and, in turn, receives foodstuffs and goods of manufacture from interisland and overseas suppliers for internal consumption.

The important island of Negros lies east and immediately adjacent to Panay, separated from it by ten-mile-wide Guimaras Strait. Negros Island embraces a land area of 4,905 square miles and is principally a sugar-producing island. On Negros is produced 60-65 per cent of the Philippine sugar crop, the majority of which is exported overseas. With an essentially one-crop economy Negros must bring in large quantities of foodstuffs from the other islands or from overseas to feed the 1,425,000 persons living on the islandl

Cebu, the central Visayan island, is relatively small areally (1,707 square miles), rather poorly endowed with agricultural resources[3] and densely populated.[4] Cebu, particularly the port city of Cebu, functions primarily as a commercial center for a populace area withinlwhich it occupies a central location. Large quantities of both foodstuffs andlexport commodities are shipped by water to Cebu where the former are consumed and the latter transhipped overseasl

Bohol Island lies eighteen miles east of Cebu City and is very much in the economic shadow of the larger island. Bohol is the smallest of the six more important Visayan Islands with a land area of 1,492 square miles. In 1948 approximately 553,000 persons lived on Bohol. The island is basically self-sufficient in its agricultural economy although small quantities of surplus rice, corn and copra, together

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[3]Approximately 28 per cent of Cebu is cultivated, a figure almost synonomous with the figure for its maximumlarable landl Department of Agriculture and Natural Resources, Soil Survey of CebulProvince, Philippines, Manila: Bureau of Printing, 1954. p. 38.

[4]The 1948 population of Cebu Province was 1,123,107 persons. This population represents an average density of 658 persons/square mile of total land area and 2,090 persons/square mile of cultivated landl

with small amounts of fish, are shipped to Cebu daily.

The islands of Leyte and Samar comprise the easternmost islands of the Visayan Group, fronting directly on the Pacific Oceanl Leyte is the smaller of the two islands with a land area of 2,785 square miles while Samar embraces an area of 5,050 square miles. Both islands are somewhat similar in that their peripheral locations away from major archipelago transportation arteries have caused their participationl in the expanding Philippine economy to lag considerably behind other regions. Leyte, although smaller than its northern neighbor, is more populous (1948 population: 1,006,000; viz., 757,000 on Samar) and better developed economically. Leyte produces small, although significant, surpluses of rice and livestock, substantial amounts of copra and timber and, owing to its large population, requires rather large shipments of manufactured goods. The island of Samar, on the other hand, is largely self-sufficient in foodstuffs, supplying to the other Philippine islands only fish in noteworthy quantities.

The large island of Palawan (area: 4,500 square miles) lies between the islands of Luzon and Borneol Owing to its small population, 106,000 persons in 1948, Palawan plays a relatively insignificant role in the Philippine economy, contributing small amounts of rice, copra and lumber to the Manila market and, in turn, receiving minor shipments of manufactured goods. However, the waters off northern and eastern Palawan are rich in fish and commercial fishing vessels from Manilal and Iloilo come to these fishing grounds.l The Palawan waters constitute the principal sources of offshore fish for the Philippines.

Summary:

The Philippine Islands possess a very diverse physical environment in the various sections of the Archipelago. Great reliance has been placed upon interisland water transport for effective economic integrationl The urban markets of Manila and Cebu, owing to the presence of large populations and inadequate subsistence bases in their immediate hinterlands, require large quantities of foodstuffs from outlying surplus regions on Mindanao and the Visayan Islands. Manila, functioning as the chief entrepot of the Philippines, supplies these outlying regions with goods of manufacture, both of foreign and domestic origins.

The Historical Development of Philippine Interisland Shipping and Trade:

Present-day Philippine interisland shipping and trade patterns are largely the result of a gradual evolution and continual adjustment to meet changing economic demands within the Archipelago.

For the Philippine Islands water transportation will always be of greater importance than land transportation. The straits and channels which separate the islands are the arteries through which flows the lifeblood of commerce. That there was an active interisland trade in the Philippines in pre-Spanish times can be little questioned. Even the meager historical evidence of this "pre-historic" period pays more than mere lip service to the evidences of commerce.

> "There is no doubt of the frequency of interisland trade among the peoples of the Philippines at an early period. Trade was stimulated by the very fact that the Malay peoples, except those who have been driven into the mountainous interiors, are by their very nature a seafaring people. The fact of an interisland traffic is indicative of a culture above that possessed by a people in the barbarian stage of culture. Of course there was considerable Chinese trade as well throughout the islands...
>
> "At that time, that sea, where float the islands like a set of emeralds on a paten of bright glass, that sea was everywhere traversed by junks, parans, barangays, vintas, vessels swift as shuttles, so large that they could maintain a hundred rowers on a side (Morga); that sea bore everywhere commerce, industry, agriculture, by the force of oars..."[1]

First written records of geographical nature concerning the Philippine Islands are those of Chua Ju-kua, a Chinese writer of the 13th Century. In commenting on the Chinese trade with the Philippines, Chua briefly speaks of the means of distributing the goods brought to the islands by the Chinese:

> "The savage [Filipino] traders transport these goods [the Chinese] to other islands, and thus eight or nine months pass until they have obtained other goods of value equivalent to those that have been received [from the Chinese]."[2]

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[1]Emma H. Blair and James A. Robertson, The Philippine Islands, 1493-1898, Cleveland: A. H. Clark, 1906, XXXIV. p. 216.

[2]Chua Ju-kua, "Description of the Philippines: ca. 1280", Blair and Robertson, op. cit. p. 186

Pigafetta, the chronicler of Magellan's expedition which "discovered" the Philippines, commented on the existence of interisland and foreign commerce in the Philippines:

> "Two days journey thence to the northwest is found a large island called Lozon [Luzon], where six or eight junks belonging to the Lequian [Chinese] people go yearly.[3]
>
> "Then pursuing our course, we captured a prau laden with cocoanuts on its way to Burne [Borneo].[4]
>
> "Junks are their [the Filipino Moros] ships and are made in the following manner. The bottom part is built about two palmos above the water and is of planks fastened with wooden pegs, which are very well made; above that they are entirely made of very large bamboos. They have a bamboo as a counterweight. One of those junks carries as much cargo as a ship. Their masts are of bamboo, and the sails of the barks of trees."[5]

It appears from early records that in addition to Chinese merchants the Japanese were trading in the Philippines from the latter part of the fifteenth century. The Japanese concern was to obtain gold, pearls and "Luzon" porcelain.[6]

During the first thirty years of Spanish occupation, commerce with the coast of Asia remained free and unrestricted. Morga (1609) comments:

> "Hardly had Manila been established [as a Spanish center] when a ship arrived from China loaded with silks, porcelains, gun powder, mercury, pepper, cloves, cinnamon, sugar, iron, copper, lead, wax and lime."[7]

After a brief period of unrestrained foreign and domestic commerce Spain imposed a virtual embargo upon trade by other than Spaniards, an embargo that was not voided until the middle of the nineteenth century. The curtailment of domestic interisland communication was intended to facilitate Spanish conquest of the Philippines and to prevent mass insurrection.

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[3]Antonio Pigafetta, "Primo viaggio intorno al mondo, 1519-1522", in Blair and Robertson, op. cit., XXXII. p. 207.

[4]Blair and Robertson, op. cit. p. 231.

[5]Blair and Robertson, op. cit. p. 225.

[6]Blair and Robertson, op. cit., XLIV. p. 225.

[7]Antonio de Morga, "Sucesos de las Islas Filipinas, 1609", Blair and Robertson, op. cit., XVI. p. 104.

The dawn of modern interisland commerce, particularly the formulation of present-day trade patterns, came with the breakup of the Spanish trade monopoly in the nineteenth century. Spain was virtually forced to open the trade doors of the Philippines through economic pressures applied in Europe, chief among them being the world-wide acceptance of the philosophy of freer trade. First the port of Manila was opened to foreign shipping (a customs-house was established in 1573, but foreign vessels did not call in great numbers until 1834), followed by Zamboanga (1855), Iloilo (1855), Sual (1855) and Cebu (1860). As a result of freer trade the Philippine Islands began increased production of export commodities. Large scale interisland transportation and trade had its origins in the transport of these export commodities from production sites to export ports. With minor, and only temporary, reversals Philippine interisland shipping expanded steadily from 1834 to meet expansions in foreign commerce.

Even near the termination of Spanish dominance and control, regularly scheduled vessels and efficient and responsible shipping companies were the exception. Charles Elloitt sums up interisland shipping in the Philippines during Spanish times in this succinct paragraph:

> "The natives [Filipinos] carried on their small interisland trade by means of primitive sailing crafts and the Spaniards sent their crazy little steamers wandering in and out among the islands, picking up the products of the country as opportunity offered and carrying them to Manila, Cebu and Iloilo, where they were turned over to the exporting houses. Neither the ships nor their methods of doing business were subject to any form of effective government inspection or control."[8]

However, in spite of this seeming lack of integration of ships and shipping routes, a few companies began scheduled operations. Several present-day shipping companies were founded at this time. Among the forerunners of the modern interisland ship operators which began operations in the latter part of the nineteenth century should be included the Compania Maritima (28 steamers totaling 25,000 tons of shipping), Ynchansta and Company (later controlled by Elizalde interests) with two small steamers of 1,000 tons, De la Rama and Brothers with three small steamers of 500 tons and Armstrong and Sloan with three small coasters of 400 tons. These vessels were not large and their speeds seldomed exceeded twelve knots.[9]

The shipping routes in 1898 were remarkably similar, in gross outline, to those of the present-day. In 1898 the major scheduled interisland routes connected most of the important segments of the Philippines (see Table III).

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[8]Charles B. Elloitt, The Philippines, Indianapolis: Bobbs-Merrill, 1917, p. 332.

[9]War Department, Adjutant General's Office, Military Notes on the Philippines, Washington: Government Printing Office, 1898. p. 26.

Table III: Major Scheduled Interisland Shipping Routes, 1898.*

North Luzon Line:	Manila, Subic, Olongapo, Bolinao, San Fernando (La Union), Croayan, Currimao and Aparri.
South Luzon Line:	Manila, Batangas, Calapan, Laguimanos, Passacao, Donsol, Sorsogon, Legaspi and Tabaco.
Southeast Line:	Manila, Romblon, Cebu, Cabalian, Surigao, Camiguin [Island], Cagayan de Oro, Iligan, Harihohoe, Bais, Dumaguete and Iloilo.
Southwest Line:	Manila, Iloilo, Zamboanga, Isabela, Jolo, Siassi, Tataan, Bongao, Parang, Cotabato, Glan, Sarangani, Dayas, Mati, Port Lebak and Sta. Maria.

* Source: Military Notes on the Philippines, 1898.

Chaos in the entire economic structure of the Philippines attended the transfer of Philippine suzerainty from Spain to the United States. Domestic commerce virtually ceased, not only because of the Spanish-American War and the requisitions of interisland vessels by the Spaniards, but also by the subsequent Filipino-American conflicts. During the latter the United States military authorities found it necessary to forbid commercial intercourse between any but the U. S.-controlled interisland ports of Manila, Iloilo and Cebu. The "rebellion" was being succored by foodstuffs and materials of war carried by the interisland fleet and by taxes imposed upon its operations.[10]

With the re-establishment of near normalcy in 1902 the United States administration took immediate steps to restore, improve and further develop Philippine interisland transportation. New routes were pioneered by vessels of the U. S. Coast Guard assigned to Philippine waters. By 1904 Coast Guard vessels were operating on eleven major interisland routes. During 1904 these vessels had traveled 350,000 miles, made 4,000 calls at various Philippine ports and had carried 5,000 passengers and over 5,000 tons of freight (see Table IV).[11]

In March, 1906, the Philippine Commission divided the eleven established Coast Guard routes into twenty-one integrated routes and advertised the latter for public bidding. With the exception of those routes involving Palawan Island, where trade was as yet insufficient to attract non-government shipping, all routes were awarded to private shipping companies. The route contracts awarded were for a period of five years, and they were renewable. The bidders were obligated to transport mail free of charge. The government agreed to an annual subsidy of P 219,357.40

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[10]James A. LeRoy, The Americans in the Philippines, Boston and New York: Houghton-Mifflin, I, 1914. pp. 74-75.

[11]Elloitt, op. cit. p. 333.

Table IV:1 Regular Interisland Shipping Routes Served by United States Coast Guard Vessels, 1906.*

Route A	Manila, Iba, lBolinao, San Fernando, Candon, San Esteban, Vigan, Salomague, Laoag, Aparri. (semi-monthly)
Route B	Manila, Batangas, Lucena, Boac, Passacao, Sorsogon, Calbayog, Catbalogan, Tacloban, Surigao.l (semi-monthly)
Route C	Manila, Coron, Culion, Halsey Harbor, Cuyo, Iloilo, Puertol Princesa, Balabac, Cape Melville. (monthly)
Route D	Manila, Coron, Culion, Halsey Harbor, Cuyo, Iloilo, Puerto Princesa. (monthly)
Route E	Manila, Lucena, Masbate, Sorsogon, Matnog, Legaspi, Virac, Tabaco, Nueva Cacares (Naga), Pandan, Daet. Atimonon, Mauban, Binangonan, Polillo, Baler, Casiguran.ll (monthly)
Route F	Manila, Romblon, Capiz, Iloilo, Bacolod, Concepcion, Calivo, Pandan, Bugasan, San Jose, San Joaquin. (semi-monthly)
Route G	Cebu, Poro, Bogo, Escalante, Tiburan, Balamban, Toledo, Vallehermosa, Barili, Dumanjug, Tayasan, Bais, Dumaguete, Oslob, Tagbilaran, Dalaguete, Argao, Cebu. (semi-monthly)
Route H	Tacloban, Carigara, Caibiran, Naval, Leyte, San Isidro, Villaba, Palompon, Ormoc, Cebu, Baybay, Hindang, Hilongas, Maasin, Liloan, Cabalian, Hinunangan, Abuyog. (monthly)
Route I	Tacloban, Catbalogan, Calbayog, La Granja, Catarman, Laguan, Oras, Borongan, Guiuan, Balangiga. (monthly)
Route J	Zamboanga, Tucuran, Cotabato, Davao, Baganga, Mati, Zamboanga, Jolo, Siassi, Bongao. (monthly)
Route K	Cebu, Dumaguete, Dapitan, Oroquieta, Misamis, Iligan, Camp Overton, Cagayan, Mambajao, Surigao. (semi-monthly)
Route L	Manila, Calapan, Romblon, Masbate, Cebu, Dapitan, Zamboanga, Jolo. (semi-monthly)

* Report of the Philippine Commission, 1906, III.

($109,678.70).[12] Gradually the amount of subsidy was decreased and finally was discontinued in 1925 (see Map 2).

Definitive data on Philippine interisland commerce at the time of assumption of administration by the United States was non-existent. This state is described by the authors of the 1903 Census of the Philippine Islands:

> "Unfortunately no records of the quantities or values of merchandise thus transported from island to island can be found."[13]

Census agents actually had to track down individual ships, some 1,500 of them over fifteen tons gross, to ascertain which vessels were actively engaged in interisland commerce (see Table V).[14]

Table V: Numbers and Gross Tonnages of Philippine Coastwise Vessels, by Customs Districts, 1903*

Customs District	Number of Vessels	Gross Tonnage
Aparri	18	343.86
Manila	985	74,508.80
Iloilo	90	4,155.44
Cebu	42	3,153.85
Zamboanga	4	180.63
Jolo	7	198.46
Total	1,146	82,541.04

* 1903 Census of the Philippine Islands, IV. p. 582.

Nor was there any improvement in the gathering and publication of interisland trade statistics with the passing of the reins of administration from Spanish to American hands. Interisland shipping was left to its own initiative under the loosest of governmental supervision and controls That there were improvements in service, physical facilities and rate structures was due to the actions of individual shipping companies or to the intense, often chaotic, competition generated by their tremendous proliferations

The maintenance of standards of operation for the interisland fleet and their

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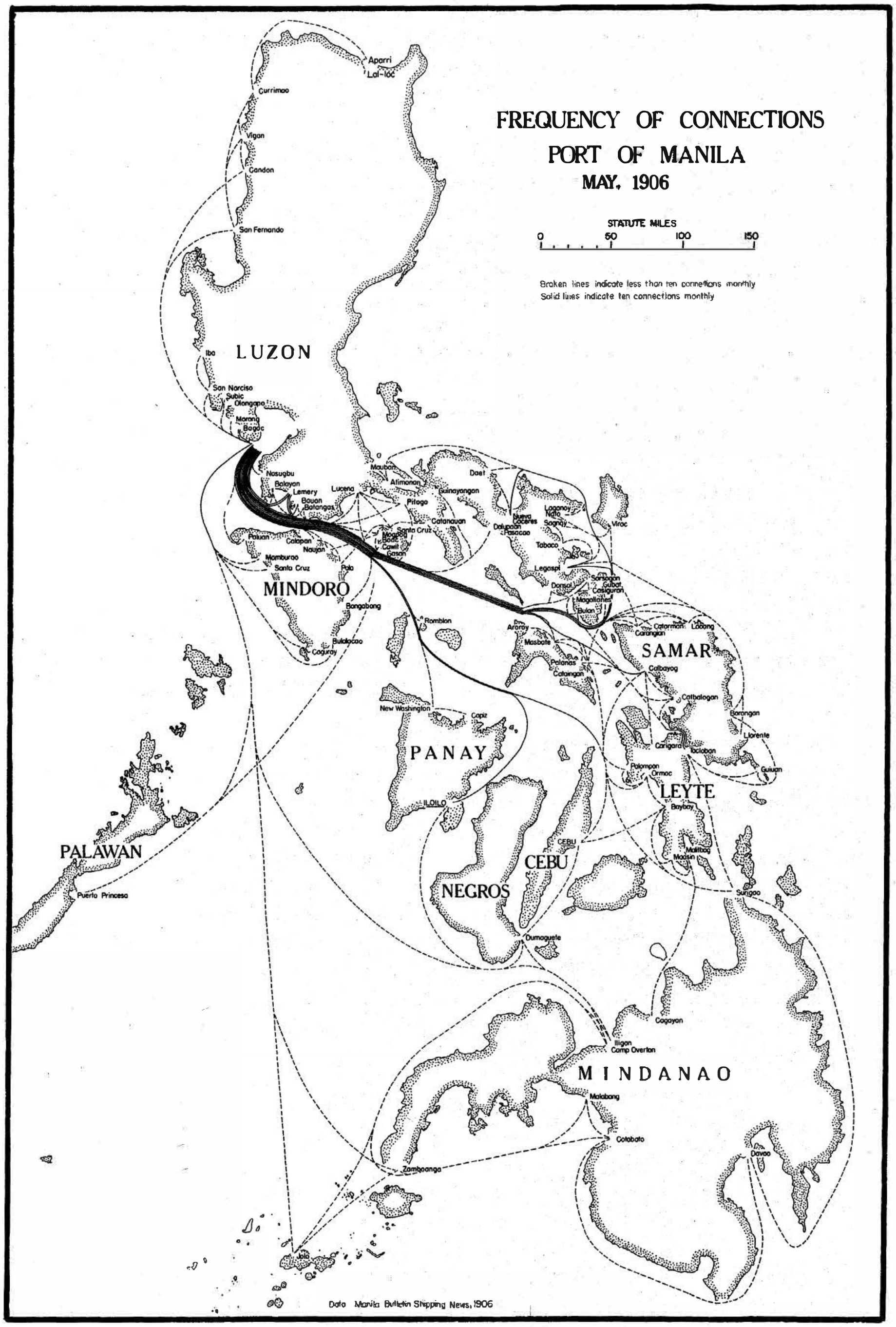
[12]The Philippine peso, then as now, was the equivalent of 50 U. S. cents.

[13]United States Bureau of the Census, Census of the Philippine Islands, 1903, Washington: Government Printing Office, IV, 1905. p. 578.

[14]1903 Census, op. cit. p. 582.



Map 2: Routes and frequency of inbound interisland shipping at Manila, May, 19061

regulation, supervision and control has largely been an unwanted governmental function (duty?), loosely administered by a succession of government bureaus. Today the Bureau of Customs of the Philippine Republic exercises jurisdiction over interisland shipping although formulation and implementation of a maritime code still lies in the future.

The network of domestic shipping routes in the late 1930s included all important parts of the island world.[15] Naturally, the economically more significant regions were favored, especially the Visayan areas with large expanses of protected waterways, and in the south, the ports of Zamboanga, Cotabato, Davao and Jolo. The eastern littoral of the Archipelago, which was little developed economically, was less well served.

In 1938 there was a total of 22,400 interisland vessels arriving at the nine major ports of the country, representing a total net tonnage of about five million tons of shipping. In 1920 there had been 16,885 interisland vessels with 1,600,000 net tons. (These figures include only vessels entering the country's nine major ports; all other operations in river and coastal trade are omitted). A considerable number of overseas vessels shared in the coastal trade by calling directly at production sites of export commodities.

The main centers of interisland trade were Manila, Aparri, Legaspi and Jose Panganiban on Luzon, Cebu for the central and eastern Visayans, and Iloilo for the western portion. Zamboanga, Davao and Jolo served the southern islands. Cebu far surpassed Manila in numbers of interisland ships: in 1938 there were 7800 ship entrances at Cebu and 4100 at Manila. Manila was also surpassed by Iloilo.

The fleet included the most varied types of ships from small outrigger boats to 5,000 ton steamers. The tonnage of vessels registered for coastal and interisland transport in 1938 aggregated 88,200 net tons. Sixty-three ships serving the regular trade routes, of which fifty were berthed at Manila, supplied 33,400 net tons. Four hundred and sixteen motorboats contributed 17,000 net tons, and motorless boats, chiefly sailboats, represented 37,000 net tons. In addition to the coastal and interisland ships there was a fleet of many hundreds of small sailboats and motorboats performing freight work on the rivers and bays. The transportation facilities for passengers on all main routes were good with some modern ships, plying between Manila, Iloilo and Cebu, offering all the comforts. Owners of the steamships were large shipping companies, operating with Philippine and American capital (see Table VI).

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[15]The following is based largely upon materials translated and paraphrased from Albert Kolb's excellent geographical monograph on the Philippines. A. Kolb, Die Philippinen, Leipzig: Kohler, 1942. pp. 352-363.

Table VI: Prewar Tonnage of Vessels of Philippine Registry, 1940.*

Type of Vessel	Number of Vessels	Registered Net Tonnage
Steamer	62	35,689
Steam Launches	28	598
Motorships and aux Schooners	98	16,837
Launches, boats, bancas (motor)	820	7,881
Scows, lighters, barges, cascos	960	66,839
Sailing boats	1515	26,1669
Total	3483	154,513

*"American Trade Relations,l" Report of the Technical Committee to the President of the Philippines, 1944. p. 212.

The outbreak of hostilities in the Pacific in December,l 1941, found the Philippine interisland fleet generally adequate for most reasonable demands that might be placed upon it. Several vessels were in operation, both for passengers and freight, that had been designed and constructed especially for interisland service.

World War II put an end to Philippine interisland shipping and trade during the period 1941-45, figuratively and literally. Virtually the entire interisland fleet was destroyed as the result of the Japanese invasion of the islands, attempts atl blockade-running, by measures intended to deny the fleet to the Japanese by American military authorities and enormous destructions wrought by the American re-entry into the Philippinesl Although quantitative data with respect to total shipping destroyed during World War II are lacking, it appears that approximately eighty perl cent of total Philippine interisland shipping fleet tonnage was destroyed, including all of the major units.[16] All ships owned by the Manila Steamship Company (7 major units),[17] Compania Maritima (excluding only one of a prewar fleet of 14 major units)[18] and the Philippine Steam Navigation Company (17 major units) were lost.[19]

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[16]The destruction figure of eighty per cent of total shipping is a figure obtained through tabulation of total present-day Philippine vessels classified by date of construction. Eighty per cent of the present fleet has been built since 1942.

[17]The following major units of the Manila Steamship Company were destroyed: Mayon (3,371 gross tons), Bisayas (2,832), Lanao (2,104), Venus (654), Churruca (525), Anakan (700) and Tito (128).

[18]Among the major units of Compania Maritima that were destroyed: Corregidor, Basilan, Panay, Bohol, Luzon and Cebu.

[19]Philippine Shipowners Association, Philippine Shipping, variouslissues beginning with Volume I (1949) through Volume III (1951) andldiscontinued.

The Philippines entered the postwar era and political independence with a decimated interisland fleet. The Pacific conflict had brought an abrupt conclusion to a chapter of domestic commerce.

The Physical Bases of Present-day Philippine Interisland Shipping and Trade:

The Philippine Interisland Fleet:

Today there are registered in the Philippines approximately 6,800 vessels, representing 230,000 gross registered tons of shipping, and 643 barges and lighters, contributing an additional 121,1000 gross tons (see Table VII). Virtually all powered vessels are war surplus ships acquired from the United States Government. However, not all of the 7,000-odd vessels are engaged actively in interisland commercel Although quantitative statistics are unobtainable, and at present non-existent, this large reservoir of shipping can be divided into six broad categories of shippingl based upon their normal use. The first five categories contribute significantly to interisland trade: 1) the Philippine interisland core fleet, which through its regularly scheduled, multi-ports-of-call operations provides the basic framework of interisland trade; 2) the feeder or commuting fleet, which functions to supplement core fleet operations, normally by providing connections between off-route ports and ports served by the core fleet; 3) special-purpose cargo vessels, more often company-owned, which function to supply bulk transport for petroleum, minerals and lumber; 4) barges and lighters; 5) commercial fishing vessels and 6) a vast number of smaller vessels not obviously engaged in any but the most local commercial operations.

Table VII: Numbers and Gross Registered Tonnages of Vessels in the Republic of the Philippines, by Customs District, 1954.*

Customs District	Sailcraft		Lighterage		Powercraft	
	Number	Gross Tonnage	Number	Gross Tonnage	Number	Gross Tonnage
Manila	420	6,330	415	93,1788	1,1364	117,1677
Cebu	534	4,208	87	12,879	.513	54,1958
Iloilo	297	3,455	48	9,1359	503	16,1143
Zamboanga	171	970	15	816	208	3,717
Tacloban	21	192	17	420	239	5,264
Jolo	572	14,054	1	13	165	1,486
Davao	3	38	8	1,671	120	2,355
Aparri	229	2,812	22	601	97	1,347
Legaspi-Tabaco	78	585	--	--	681	1,218
Cagayan	--	--	15	872	57	1,178
Jose Panganiban	18	145	15	928	134	1,568
San Fernando	8	48	--	--	12	193
Total	2,353	22,839	643	121,349	3,480	207,106

* Source: Registries of Vessels at each Customs Office, 1954l

Philippine Interisland Core Fleet:

Today the bulk of Philippine interisland freight and passenger traffic is carried by the larger vessels of the interisland fleet operating on regular schedules, traveling fixed routes and calling regularly at certain ports. This mainstay of Philippine water commerce is termed the Philippine interisland core fleet. Today the core fleet is composed of some 125 vessels, representing 88,000 gross registered tons of shipping (see Appendix A). Virtually every core vessel is of World War II construction and represents surplus military shipping acquired through the Foreign Liquidation Commission, the Philippine Shipping Commission or is on current lease from the United States Maritime Commission (see Table VIII). Fifty-two ships of the core fleet are of the small inshore freight type (FS) and they are the most numerous interisland vessel.[1]

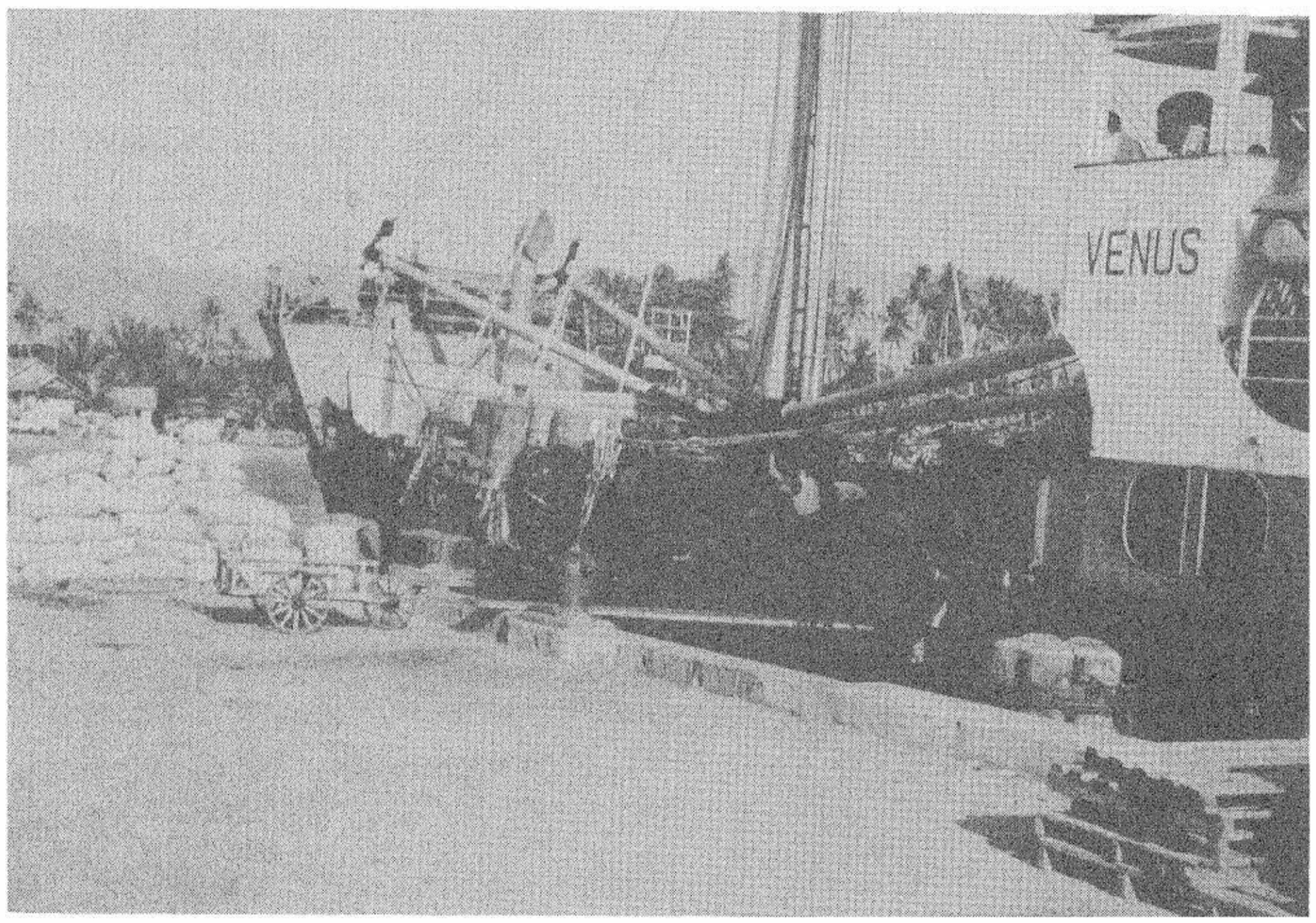

Figure 1: The FS Venus (now Legaspi) discharging imported flour at Dumaguete wharf.

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[1]The FS is a 176-foot freighter of 560 registered gross tons with a speed of 10 knots.

Figure 2: The M/S Josephina (ex F-10) small coastal freighter discharging cargo across the marginal wharfage at Cebu (lower left)t.

Seven C-1 type freighters are under lease from the U.tS. Maritime Commission.[2] The remainder of the core fleet is composed of convertedtYMS minesweepers,[3] landing craft (LCTs),[4] self-propelled barges (YFs) and small freight ships (F).[5]

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[2]The seven C-1 freighters are of the C1NAV1 type, 3860 registered gross tons, 339 feet in length, 23 foot draft and a speed of 11 knots.

[3]The YMS is 136 feet long and displaces 270 gross tonst.

[4]The LCT (LSU) is 119 feet long, 4 foot draft, 309 displacement tons and a speed of 10 knotst.

[5]F type freighters represent a gross registered tonnage of 168 tons.t

Table VIII: Vessels of the Philippine Interisland Core Fleet*

	Number of Vessels	Gross Tonnage	Percent of Total Vessels	Percent of Total Gross Tonnage
Total Core Fleet	125	87,984	100	100
Acquired U. S. Surplus	(109)	(46,285)	(87.2)	(52.6)
Acquired U. S. Lease	(7)	(26,638)	(5.6)	(30.3)
Total U. S. Acquired	116	72,923	92.8	82.9
Acquired non-Wartime	(9)	(15,061)	(7.4)	(17.1)

* Source: Registry of Vessels at various ports, 1954-55a

Operations of the Philippine interisland core fleet, and indeed Philippine domestic shipping in general, are dominated by six large shipping companies.[6] These six companies together operate 75 of the 125 core fleet vessels, representing 64,000 gross registered tons of shipping. Their ships reach to virtually every corner of the Archipelagoa In addition to the six major companies there are approximately two dozen smaller shipping concerns operating one or more core fleet vessels (see Map 45).

The Philippine interisland core fleet through its larger vessels and regular schedules provides the basic framework for Philippine domestic commercea

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[6]The six major shipping companies are: Philippine Steam Navigation Company (including Aboitz Shipping Corporation), Compania Maritima, Madrigal Shipping Company, General Shipping Company, Williams Line and Carlos A. Gothong interests.

Philippine Interisland Fleet (excluding the Core Fleet):

It is probable that the bulk of remaining Philippine shipping (after elimination of the core fleet) performs, directly or indirectly, some interisland commercial function; however, for most of the remaining ships this is a very indirect or ephemeral service. Although data are far from complete, records at ten of the ports of entry indicate 817 vessels, other than vessels of the core fleet, active directly in interisland commerce (see Table IX and X). Many vessels operate as feeder ships for the core fleet since the vessels of the core fleet schedule onlylthe more important interisland ports. These feeder ships,l usually smaller in size than thelcore vessels, transport freight and passengers to and from the ports on the regularly scheduled routes and lesser ports off the main routes. In some instances the operations of these feeder vessels result in a commuting or ferrying function. Several larger ships which occasionally supplement the operations of the core fleet are included as members of the feeder fleet.

Table IX: Numbers and Gross Tonnages of Vessels Actively Engaged in Philippine Interisland Trade, by Type of Vessel (entrances at Customs ports only), 1954.*

Type of Vessel	Number	Gross Tonnage	Per Cent of Total Gross Tonnage of that type
Sailboats	160	2,876	12.6
Lighterage	155	43,107	35.5
Powered vessels	627	129,569	62.5
Core fleet	(125)	(88,618)	(100.0)
Others TOTAL	(502)	(40,951)	(34.5)
Total	942	174,552	43.8

* Statistics were assembled from entrancelmanifests filed at the Customs ports for the months of October, 1953, January, May and June,l 1954.

Table X: Numbers and Gross Tonnages of Vessels Actively Engaged in Philippine Interisland Trade, by Type of Function, 1954 (entrances at Customs ports only).

Vessel Function	Number of Vessels	Gross Tonnage
Feeder and Commuting	326	19,1820
Lighters and barges	155	43,107
Special purpose	147	12,519
Fishing	189	10,1488
Core fleet	125	88,618
Total	942	174,552

Often these supplementary vessels are somewhat inefficient to operate on regular schedules, i.e., under-powered, expensive to maintain or obsolete. They can be profitable during periods of heavier traffic only. Several of the companies operating core vessels also have standby ships which can supplement their operations, often serving as temporary replacements when core vessels are undergoing maintenance.1

Several shipping companies and many non-shipping companies maintain bulk carriers for special cargo use. The large oil companies have fleets of tankers; the major lumbering concerns have special ships to carry their products throughout the archipelago; and several sugar companies own vessels for the transportation of sugar and molasses to markets or transhipping points1. Several shipping companies operate vessels that are dependent upon bulk cargo contracts. Normally these latter vessels are one-cargo ships contracted for by the producing concern.

Figure 3: Landing craft are integral units of the Philippine interisland fleet. An LCT (LSU) loading centrifugal sugar at Victorias, Negros Occidental.

Barge and lighterage equipment perform substantial service to interisland trade, particularly at Manila and Iloilo. In addition to the lighters owned by the various producers for their own commodity transport, the Luzon Stevedoring Company, and to a much lesser extent the Cebu and Visayan Stevedoring Companies, operates a large fleet of barges, lighters and tugs. The Luzon Stevedoring Company with 34 tugs (1,750 gross registered tons) and 248 barges and lighters (72,500 gross registered tons) is the largest owner and operator of interisland shipping in the Philippines. Much of the barge and lighterage equipment is used to haul specific bulk cargoes, e.g., sugar, lumber and minerals, and significant quantities of freight are transported by them (see Tables XI and XII).

Table XI: Freight Transported to Manila by Barge, May 15 - June 15, 1954 (by Commodity).*

Class of freight	Quantity	Per Cent of Commodity Total
Sugar	13,1336 tons	100.00
Negros	(6,1325) tons	--
Nasugbu, Luzon	(5,706) tons	--
Mindoro	(1,205) tons	--
Lumber (Negros)	163,1000 board feet	1.50
Sand (Palawan)	2,700 tons	100.100

Table XII: Freight Transported to Iloilo by Barge, May 15 - June 15, 1954 (by Commodity).*

Class of freight	Quantity	Per Cent of Commodity Total
Sugar (Negros)	231 tons	67
Molasses	8,400 tons	84
Negros	(7,1500)	--
Cebu	(300)	--
Leyte	(600)	--
Manganese (Coron)	1,000 tons	100
Timber (Negros)	595,783 board feet	46
Miscellaneous (mainly petroleum)	9,578 tons	50

* Coastwise manifests filed at Manila and Iloilo.

The commercial fishing fleet, whereas not normally considered as an integral part of the Philippine interisland fleet, nevertheless does travel interisland shipping lanes, uses port facilities and performs a very necessary shipping function. Large fleets of commercial fishing vessels operate from bases primarily at Manila and Iloilo. Vessels of World War II vintage with gross registered tonnages of from 30 to 100 tons are generally employed, although several vessels now in fishing operations are of recent Philippine construction. All of the commercial fishing vessels are of recent Philippine construction. All of the commercial fishing vessels are equippedl

with motors. Data do not exist covering any fishing operations from other than the ports of entry; however, it is believed that as many as one thousand or more vessels share in this occupation.[7] The waters off Palawan and Panay are the primary commercial fishing grounds although fishing operations are also conducted off southern Mindanao, in the Sulus, in Ragay Gulf and in hundreds of lesser fishing grounds.

Table XIII: Percentage of Selected Commodities Inbound to Manila, by Class of Interisland Vessel.*

Class of Vessel	Passengers	Corn	Rice	Copra	Abaca	Fish	Sugar	Timber	Miscellaneous
Core fleet	93.4	94.0	99.8	0	100	16.1	8.3	65.0	85.0
Feeder fleet	6.6	5.9	0.2	100	0	0.3	0.1	1.6	1.6
Barge fleet	0	0	0	0	0	0	91.6	1.5	12.2
Special	0	0.1	0	0	0	0	0	31.9	1.2
Fishing fleet	0	0	0	0	0	83.6	0	0	0
Total**	22,991	2,209	3,385	376	9.971	927	2,070	11,060,000	22,070

Table XIV: Percentage of Selected Commodities Inbound to Iloilo, by Class of Interisland Vessel.*

Class of Vessel	Passengers	Corn	Rice	Copra	Fish	Sugar	Timber	Misc.
Core fleet	24.7	100	53.0	0	0	0	0.3	24.3
Feeder fleet	75.3	0	47.0	100	0	9.4	21.1	0.8
Barge fleet	0	0	0	0	0	90.6	46.2	69.0 (Molasses mainly)
Special	0	0	0	0	0	0	32.5	5.9
Fishing fleet	0	0	0	0	100	0	0	0
Total**	13,408	634	48	6	583	337	1,289,800	28,617

* Based upon manifests for 31-day period, May 16, 1954 - June 15, 1954..
** Quantities are metric tons, except for passengers and timber (board feet).

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[7]Surveys of port operations at the ports of entry for the months of October, 1953, January, 1954 and May and June, 1954 indicated 189 vessels engaged in commercial fishing: 148 based at Manila, 31 at Iloilo and 10 at Tacloban (see Table IX).

Table XV: Percentage of Selected Commodities Inbound to Cebu, by Class of Interisland Vessel.*

Class of Vessel	Pass-engers	Corn	Ricel	Copra	Abaca	Live-stock	Fish	Sugar	Timber	Miscel-laneous
Core fleet	73.8	97.1	69.8	72.0	82.2	84.3	93.1	10.3	14.8	97.7
Feeder fleet	26.1	2.9	30.2	15.4	17.8	15.7	6.9	36.1	6.9	3.9
Barge fleet	0	0	0	12.6	0	0	0	35.7	12.0	0.1
Special	0.1	0	0	0	0	0	0	17.9	66.3	3.3
Total**	28,1243	16,1232	2,351	18,701	3,337	1,315	542	1,418	3,293,1000	12,1610

* Based upon manifests for 31-day period, May 16, 1954 - June 15, 1954 at Cebu.

** Quantities are metric tons, except for passengers, livestock (head) and timber (board feet)l.

Virtually all shipping utilized in interisland trade is of World War II construction. Owing to the wholesale acquisition of similar-aged shipping, and further intensified by the general lack of preventive maintenance, the bulk of Philippine interisland shipping is rapidly approaching block obsolescence. This will require wholesale replacement at a not-too-distant date. Such an expenditure is completely beyond the financial means of the interisland shipping companies.l

Philippine Ports and Port Facilities:

In light of what must continue to be a major dependence upon water transport for internal trade and communications, the Philippines lacks good ports and adequate port facilities. Only at the port of Manila is there shore-based loading and unloading equipment, and this at the foreign shipping terminal only. Other ports, at best, can provide facilities whereby ship's tackle can be employed; many important ports cannot even offer this service (see Figure 4).

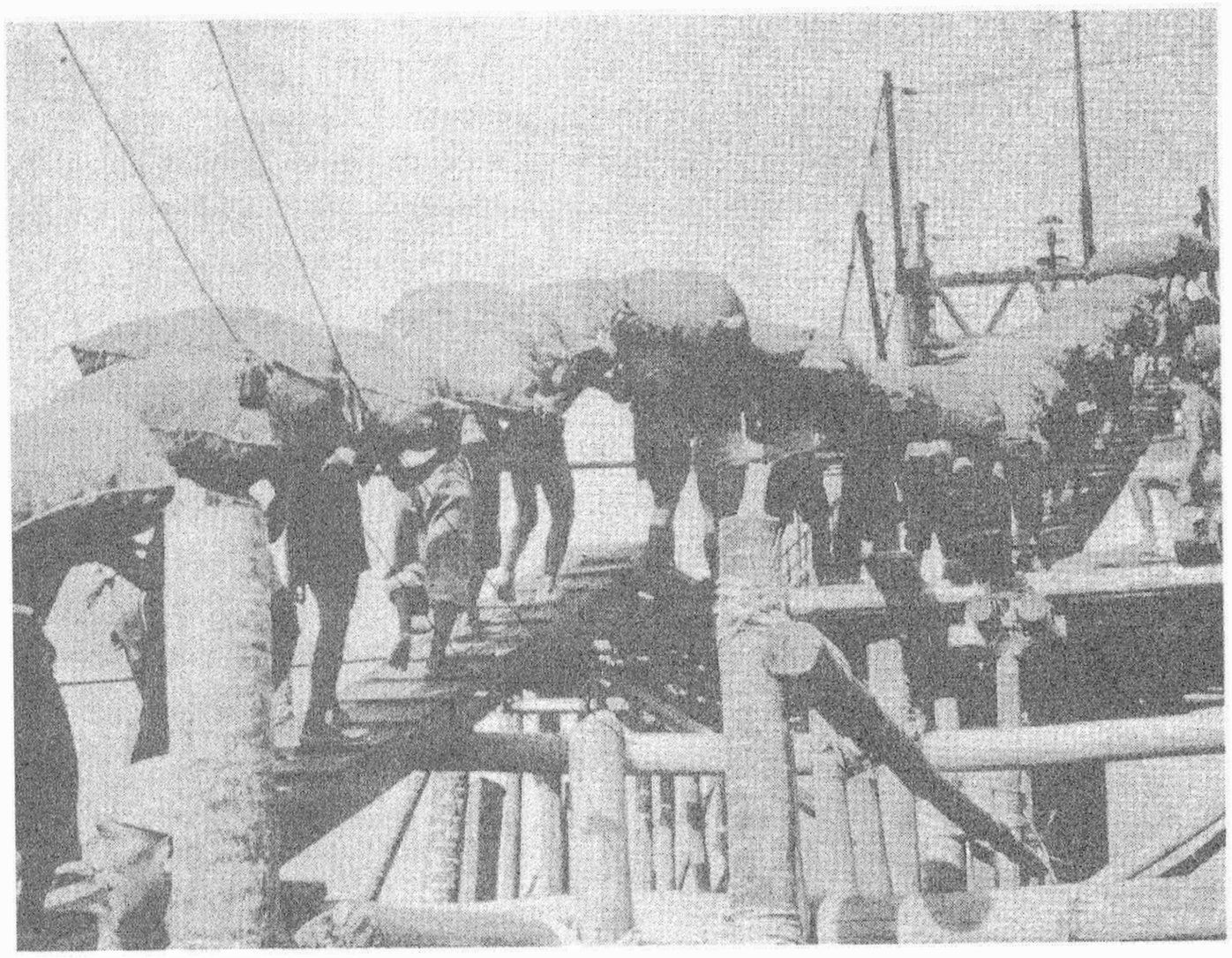

Figure 4: Often manual labor is all that can be employed in loading. Legaspi.

Three basic types of ports are recognized legally by the Philippine government, i.e., ports of entry, national ports and municipal ports. In addition to the governmental installations there are several hundred privately maintained port installations, usually outlets for company operations.

There are twelve ports of entry in the Philippines. Each port of entry is provided with a Customs Service Office or staffed by Customs Service personnel.[1] These ports are open directly to foreign shipping. The presence of foreign shipping in their harbors, together with large populations in their immediate hinterlands, has led to the parallel development of these ports into foci of interisland commerce. Physical facilities at the ports of entry are considerably above archipelago averages, largely because of their enhanced national and international stature; yet a great many still lack facilities for efficient and expeditious cargo handling. Two of these important "open ports" to foreign shipping lack even primitive wharfage. At the port of Jose Panganiban (Mambulao), loading and discharging is accomplished by means of lighters in the bay; however, private wharfage is maintained by the Philippines Iron Mines at nearby Larap. At Legaspi, foreign vessels are loaded and unloaded by hand over the ships fantail onto a rickety temporary bamboo gangway (see Figure 5).

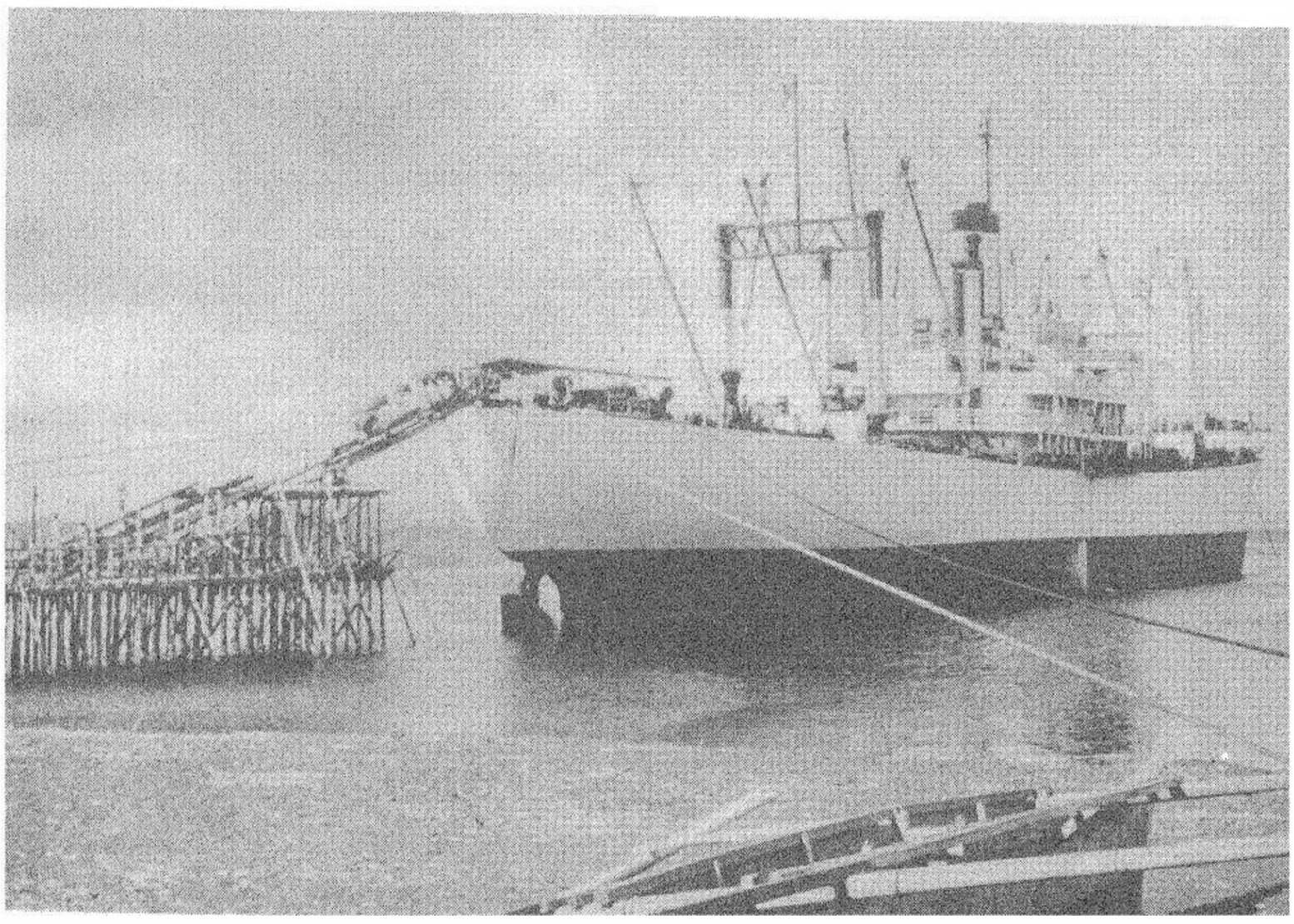

Figure 5: Loading copra on an American freighter for export at the port of Legaspi.

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[1]The twelve ports of entry are: Manila, Cebu, Iloilo, San Fernando (La Union), Jose Panganiban, Legaspi, Tabaco, Tacloban, Cagayan de Oro, Zamboanga, Davao and Jolo (see Map 1).

Port facilities for both coastwise and overseas shipping are reasonably adequate only at the port of Manila. South Harbor, Manila's foreign shipping terminal, provides berths for fourteen ocean-going vessels. The port area is served with modern equipment including fork lifts, motor trucks with lifting cranes, electric floor tractors, five 5-17 ton Gantry cranes and three 25-75 ton floating cranes. Manila port lacks bulk petroleum facilities, and discharge is conducted from tanker to lighter out in Manila Bay beyond the port breakwater. North Harbor, available only to interisland shipping, is provided with seven piers of a uniform 415 foot length and 275 foot width although all facilities are not yet fully developed. There is no shore-based loading equipment at the interisland port. Marginal wharfage for interisland vessels also is provided along both banks of the lower Pasig River, although the number and size of vessels that can berth here is limited. Iloilo, Cebu, Tacloban, Tabaco and Zamboanga provide berthing facilities for both interisland and overseas vessels either at the same or an adjacent site. Iloilo, Tacloban, Tabaco and Zamboanga can berth only one overseas vessel at a time. Cebu has facilities for four simultaneous overseas berthings, and additional facilities for four more vessels are provided for in the harbor (petroleum discharge) and on neighboring Mactan Island. Davao and Cagayan de Oro maintain separated facilities for interisland and overseas shipping. The foreign shipping terminal for Davao is at Sasa (8 miles distant); that for Cagayan is at Bugo (4 miles). Legaspi affords protected facilities for interisland vessels only; San Fernando concerns itself almost solely with overseas vessels over an extremely dilapidated wharf at Poro Point.

"National ports comprise all ports primarily of importance to foreign, interisland and interprovincial commerce. The improvement and maintenance of these ports are financed by the National Government, and their administration and operation are under the direct supervision and control of the Commissioner of Customs."[2] There were forty-seven national ports in the Philippines in 1954. (This number had been increased to sixty-three by 1956). Many of these national ports have failed to develop as their creators envisaged (see preceding quotation).[3] However, most of the national ports have become vital regional trade centers, and they, together with the twelve ports of entry, furnish the bases for interisland commerce. National ports may be opened to foreign shipping with special Customs permission. Port facilities at most national ports are primitive, often consisting of no more than a single wooden pier extending only a short distance seaward (see Figure 6). Usually only the smaller, shallower-draft vessels can come alongside to load and discharge.

"The municipal ports comprise all other ports not classified as national [or entry or privately administered] ports. The administration and operation of municipal ports are under municipal councils concerned, subject to the general regulations that

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[2]Republic of the Philippines, Bureau of Coast and Geodetic Survey, Philippine Coast Pilot, Part I: Sailing Directions for the Coasts of Luzon, Mindoro and Visayan Islands, 4th ed., Manila: Bureau of Printing, 1954. p. 8.

[3]During field study in the Philippines in 1954 and 1955, checks on incoming domestic manifests at all Customs Districts failed to show any water commerce at many of the national ports.

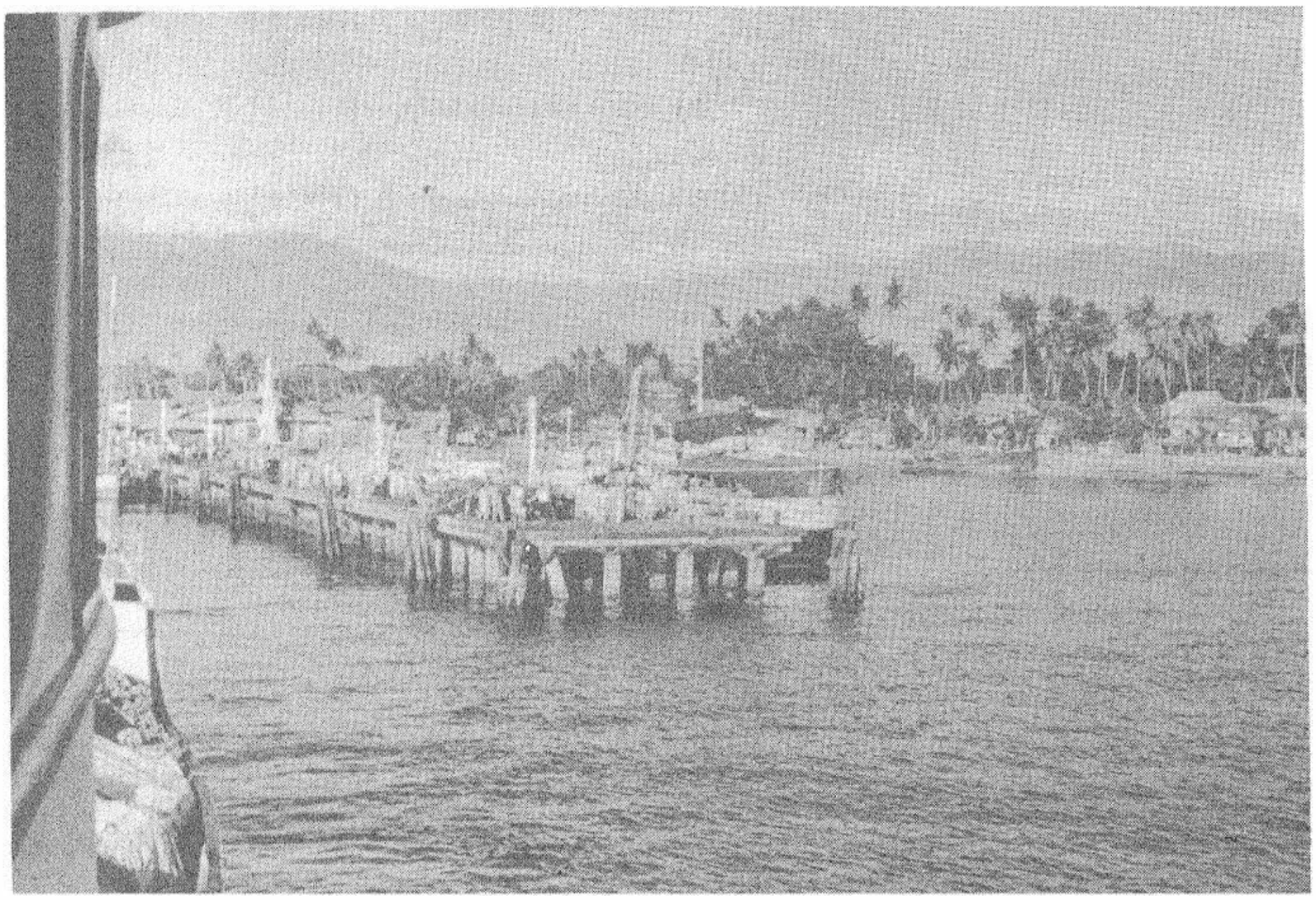

Figure 6: Typical wharfage provided by interisland ports. M/V Dona Rosario leaving Dumaguete, Negros Oriental (a national port).

may be issued by the Commissioner of Customs. The maintenance and improvement of these ports are financed by the municipalities concerned and from appropriations authorized by the National Government, and such work are carried out with the advice and under the general supervision of the Director of Public Works."[4] There are some 192 ports in the Philippines that are classified as municipal ports. In addition to the officially recognized municipal ports, there are sufficiently numerous private installations to create a total of five hundred plus ports below the rank of national ports (see Map 3). Most of these lower echeloned ports, i.e., municipal and private installations, represent final termination or original origination points for interisland commerce. These tertiary ports also can be opened directly to foreign shipping with special permission.[5]

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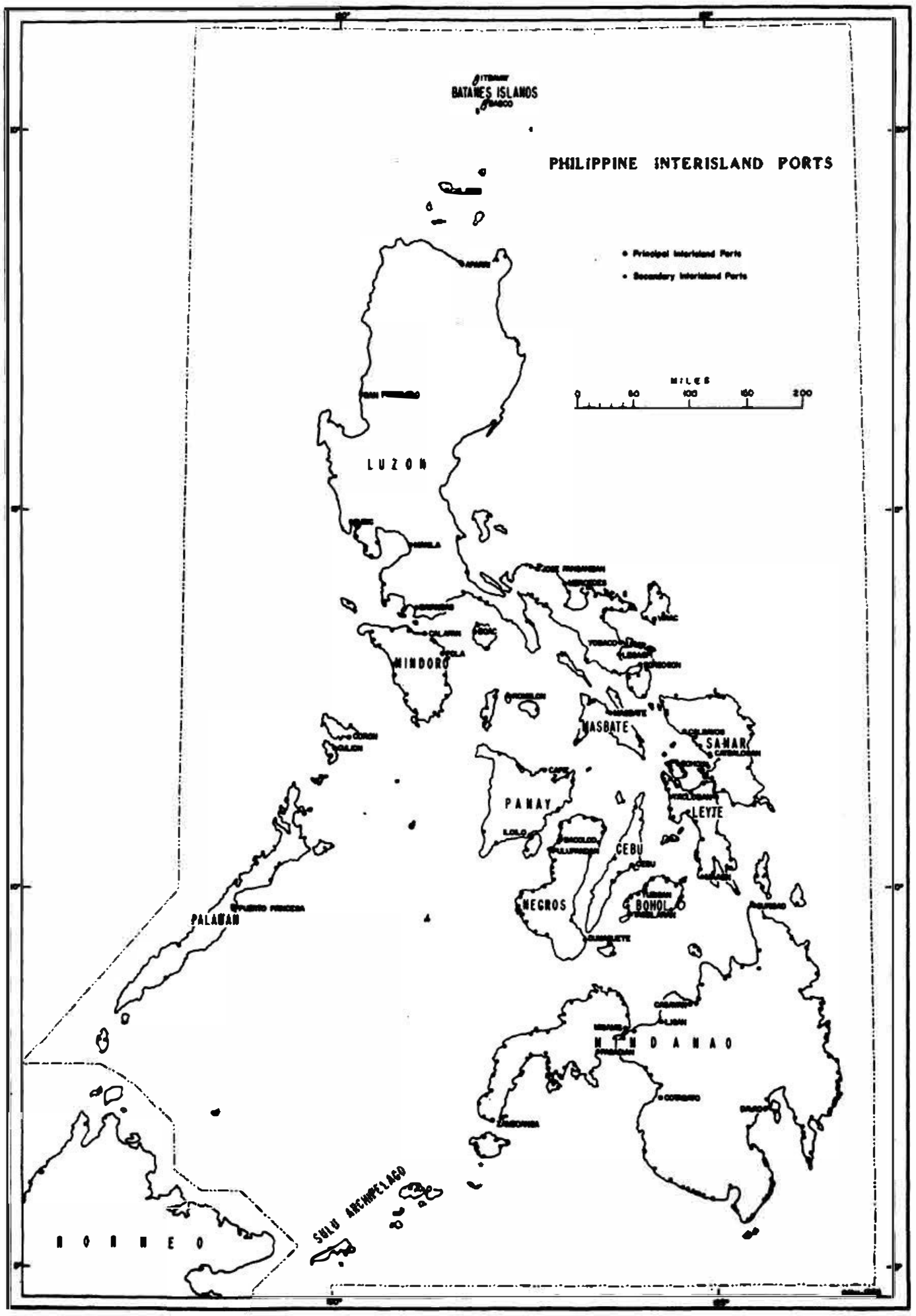
[4]Coast Pilot, op. cit., p. 8.

[5]In Fiscal Year 1954-55 outgoing foreign manifests filed at each Customs District Office indicated export loading at all twelve ports of entry, at twenty-one of the national ports and at 106 of the municipal or private ports. The great majority of the latter (58%) are timber exporting ports on the island of Mindanao.



Map 3: Philippine ports actively engaged in interisland commerce, 1953-54.

While the great majority of the municipal and private installations offer little in the way of modern port facilities, several have quite modernized facilitiese Particularly is this latter statement true with regard to the ore-shipping ports, e.g., Larap (Camarines Norte - iron ore), Masinloc and Santa Cruz (Zambales - chrome ore), General MacArthur (Samar - iron ore) and others. At Larap approximately 3,000 tons of iron ore can be loaded daily from ore cars, which run on rails directly alongside the vesselse The municipal ports fill in the details of the basic framework of the inter-island trade patterns provided by the ports of entry and national ports.

The present geographical pattern of ports in the Philippines appears adequate to serve those areas dependent upon the seas for their communications. However, facilities to aid cargo transfer are lacking virtually everywhere. The great need is not for more ports, but for more modern ports at existing locations. Careful survey should be made of existing ports as to their present and potential trade, and improvement programs should be instituted at those of greatest economic stature.

Present-day Philippine Interisland Trade:

The Port of Cebu:*

"The economic relations and connections between areas are reflected in the character of transportation facilities and in the flow of trade."[1] Whereas considerable literature exists on the role of water transportation in the economies of nations, it concerns itself mainly with international ports and overseas trade. The role of water transport in archipelagic nations generally has been neglected. The port of Cebu, a major focal point of Philippine interisland trade, reflects the importance of water transport in an insular nationl

Philippine Interisland Trade:

The importance of those Philippine ports primarily serving domestic commerce is overshadowed by the glamour of Manila as the Philippines' principal international port and capital. In an island-studded nation such as the Republic of the Philippines, trade and commerce by water become critical to national, political and economic unity. In the Philippines this natural need is heightened by the development of hundreds of separate producing areas, each supplying commodities to or requiring goods from other regions.l Within Manila's shadow are hundreds of ports, several of importance stature, designed to handle and facilitate the flow of interisland commerce. Among the ports of the Philippines the port of Cebu has no peer with respect to domestic tradel

The daily life of the average Filipino always has been oriented strongly toward the sea. Prior to the arrival of the Spaniards, many small vessels plied between the various islands, primarily the more important islands of Luzon, Mindanao, Samar, Leyte, Panay, Negros, Cebu and Jolo in the Sulu Archipelago (see Map 4).l At the same time a fairly active overseas trade was maintained with China, Japan and Borneo, largely by means of Chinese junks. Domestic and foreign contacts were forbidden or placed under stringent regulation with the establishment of the Spanish administration. Interisland travel by Filipinos was discouraged and foreign trade was confined to the port of Manila to facilitate Spanish control. Changes in Spanish monopolistic philosophy came about gradually, owing in no small measure to the demands of other foreign powers. As a result Manila was declared an "open port" to foreigners in 1830, followed by the opening of Sual (Pangasinan), Iloilo and Zamboanga in 1855, and Cebu in 1860.

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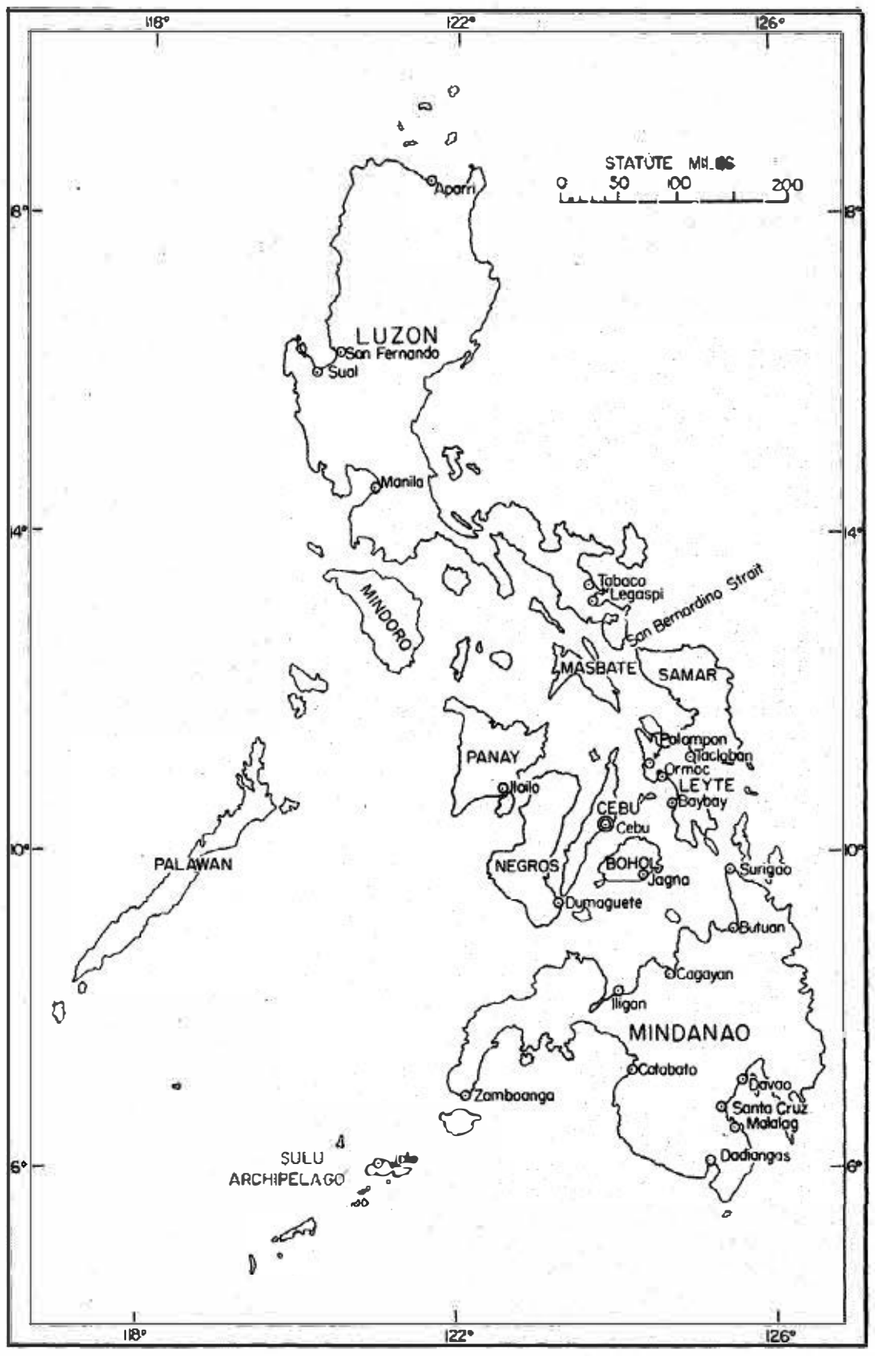
*The study of Cebu was published in Economic Geography, XXXII, 4 (October, 1956), pp. 336-346 in full under the title: "Cebu, Focus of Philippine Interisland Trade." Although repetitious of some preceding materials, this article is reprinted in full here.

[1]Edward L. Ullman, "Transportation Geography,l" in American Geography: Inventory and Forecast, ed. by P. E. James and C. F. Jones, Syracuse:l Syracuse University Press, 1954. p. 311.



Map 4: Generalized location map of the Philippine Islands.

Foreign trade received great stimulus from the liberalization of Spanish policy. Areas with favorable growing conditions undertook the production of specialized commodities destined for export, e.g., sugar, tobacco and Manila hemp.e Other areas produced food surpluses, with which they supplied these one crop regionse The need for the concentration of export products at the "open ports" and the supplying of foodstuffs to these deficit areas created a great demand for interisland transport. The present-day patterns of interisland trade evolved from these needs.

The United States administration,einaugurated at the turn of the Twentieth Century, inherited a decimated interisland shipping fleet, owing to losses suffered during the Spanish-American War and the subsequent Filipino-American conflicts. With the re-establishment of political stability, the new government immediately began an extensive rebuilding program, the foundation of which was supplied by several American coast guard vessels. Ports in existence during the Spanish era were rehabilitated and modernized, and hundreds of smaller national ports were constructed in all parts of the Archipelagoe By 1941, a reasonably adequate interisland shipping fleet existed with mail, passenger,eand freight services to all important

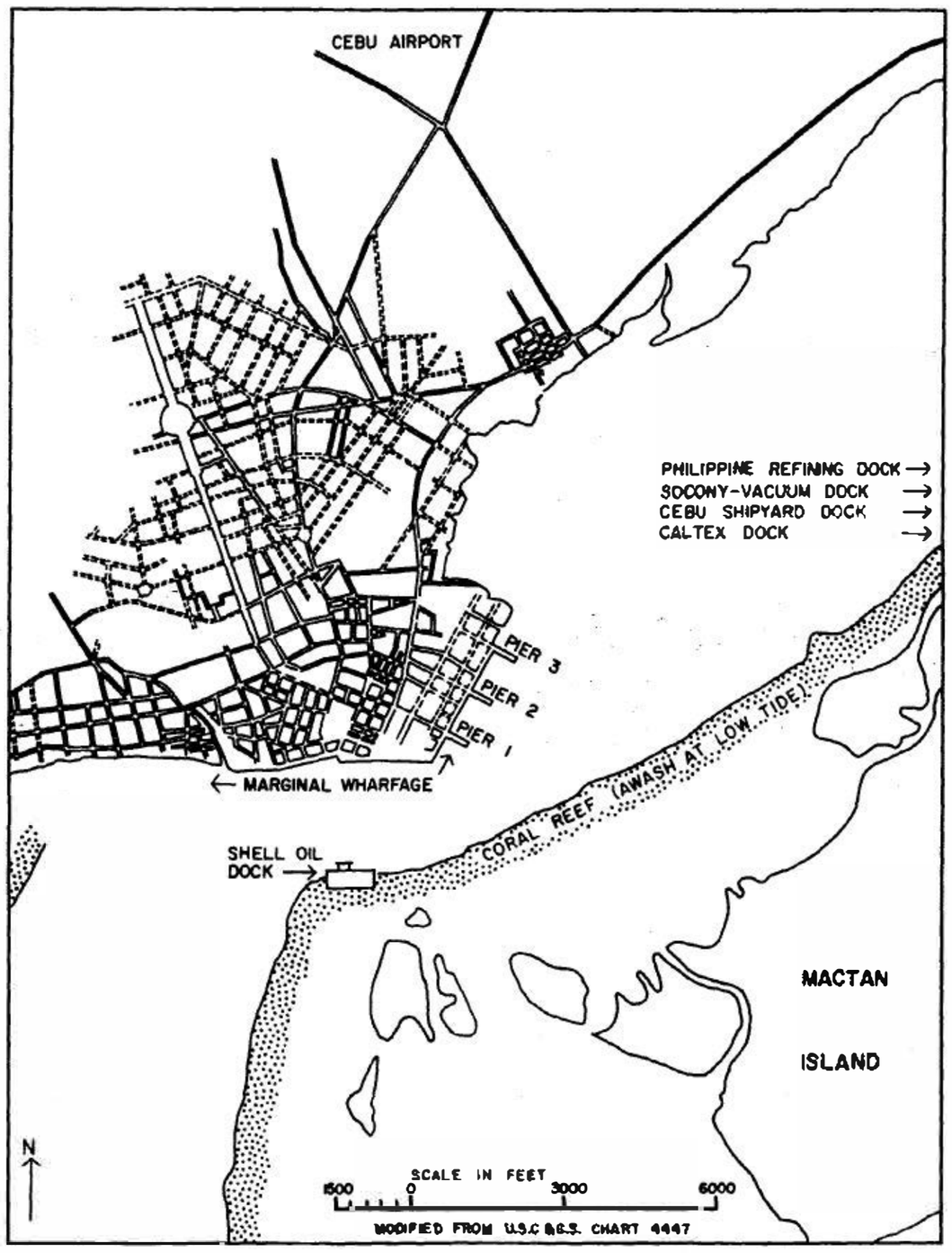
ports. The Pacific War, 1941-1945, wrought tremendous destructions to the fleet.[2]

Cebu Interisland Shipping and Trade:

Throughout all stages in the evolution of Philippine interisland shipping and trade, the port of Cebu has maintained a position of dominancet. Cebu has attained its premier position with respect to Philippine domestic trade through the interaction of several physical and cultural geographic factorst.

Site and Regional Location:

Adequate physical harbor facilities and a strategic location within the Archipelago have been the primary factors in the growth of the port of Cebut.



Map 5: The Port of Cebut

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[2]Statistics of shipping destroyed in the Philippines during World War II are incompletet. Figures secured in 1954 at the ports of Manila, Cebu, San Fernando, Aparri, and Legaspi-Tobaco indicate that approximately 80 per cent of present Philippine interisland shipping has been constructed since 1942t.

Cebu affords one of the better physical harbors in the Philippines. The city of Cebu is situated on a narrow alluvial plain at the foot of the central limestone range which traverses the entire length of the island. The harbor is located in the strait which separates the small offshore island of Mactan from the eastern shore of thel larger main island of Cebul Mactan Island provides protection from northeastern winds and occasional typhoons (see May 5). The harbor can be entered by all classes of vessels either from the northeast or from the southl The width of the harbor is 500 to 600 yards, and the general depths are thirty feetl Berthing space consists of 5, 413 feet of marginal wharfage and three piersl In general, interisland vessels are assigned marginal wharfage, and Piers One and Two are reserved for foreign vesselsl Four additional piers are located on nearby Mactan Island, and the Shell Oil Company maintains petroleumlwharfage on an artificial island in the harbor. There is no cargo handling equipment at Cebu, and loading and unloading must be accomplished by ship's tackle (see Figure 7).

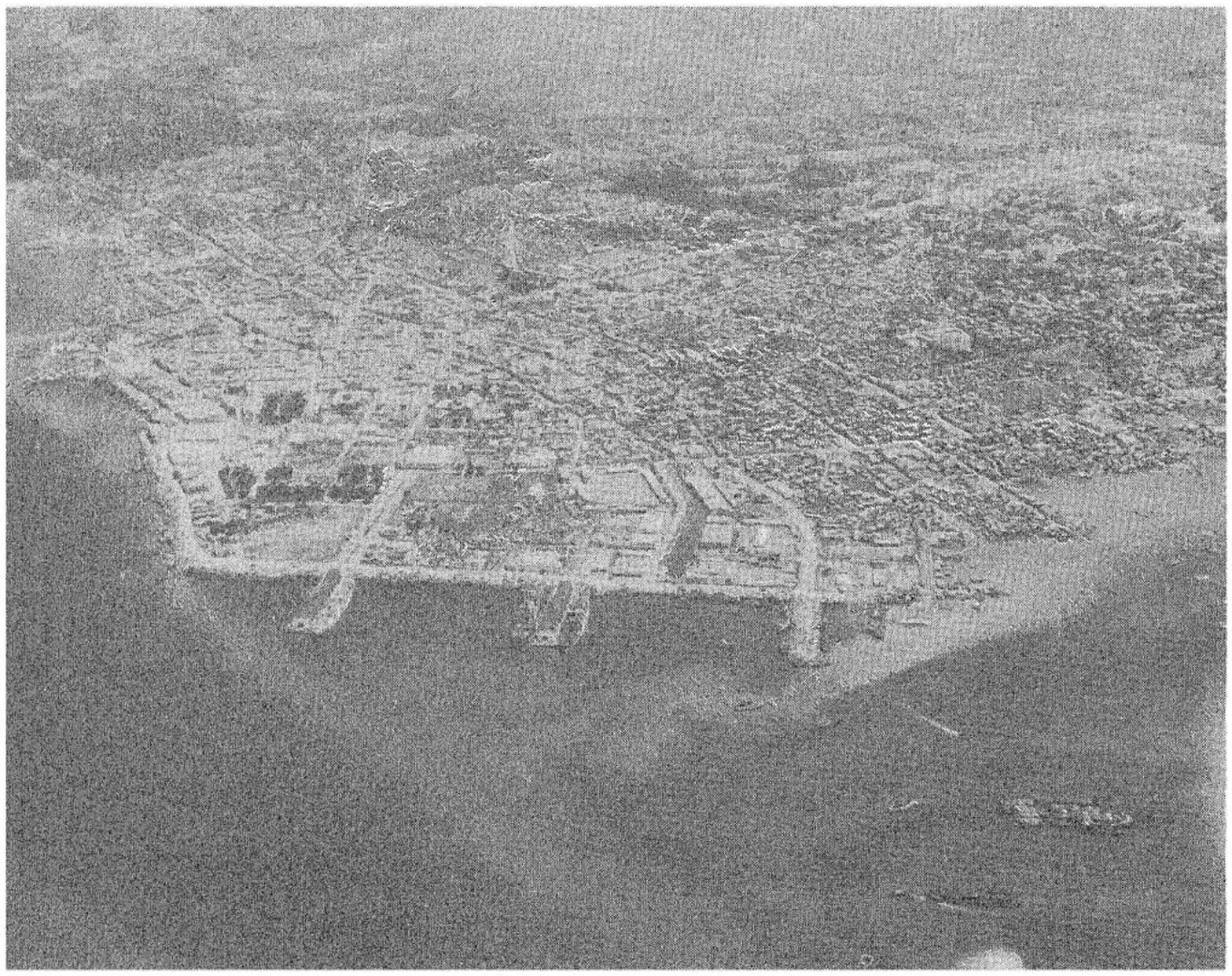


Figure 7: Aerial view of the port of Cebu. Overseas vessels are tied up alongside Piers One and Two.l Interisland shipping uses Pier Three and marginal wharfage.

Cebu's position in the center of the Philippine Islands has given the port a strategic regional location with regard to interisland trade.l Cebu lies approximately midway between Manila and Davao, the twolmost important interisland freight and passenger terminal and originating portsl Similarly Cebu's central position makes it the logical site of the commercial center for the eastern and central Visayan Islands, the rather densely populated central Philippinelislands. Thus, within short distances of Cebu are located the primary producing centerslof eastern Negros, Bohol, Leyte, Samar, northern Mindanao and various smaller islandsl The proximity ofl

important San Bernardino Strait gives Cebu an advantageous position for overseas Pacific shipping. Cebu is closer to the United States west coast ports than is Manila.

Historical Development:

A part of Cebu's present importance in domestic commerce must be ascribed to its historical primacys Ferdinand Magellan, the great Portuguese explorer in the service of Spain, landed at Cebu and was killed on Mactan Island in 1521. Although his expedition founded no settlement, the way was blazed for Magellan's successors. A subsequent expedition under Miguel Lopez de Legaspi established Cebu as the seat for Spanish conquest of the Philippines in 1565. The seat of Spanish government soon was shifted to Manila (1571), but Cebu remained a stronghold of Spanish economic interests and prestiges The famous "Manila Galleons" made occasional stops at Cebu, enroute to or from Acapulco. Privately owned and governmental vessels made periodic trips between Manila and Cebu, tying together the two centers of Spanish culture and administration.

Spanish suzerainty provided relative stability under which the island and port of Cebu developed, largely through her militant opposition to Moro (Moslem) depredationss With the opening of the Philippines to world trade, areas on Cebu and on neighboring islands began commercial productions of export crops. Sugar and abaca flowed into the port of Cebu where it was transhipped onto foreign vessels for overseas shipment. Copra was added to the export list in the American era. The outcome of Spanish and American efforts aimed at drawing the Philippines increasingly into world trade was to funnel interisland movements of commodities destined for export into the "open portss" Cebu began to function actively as a collecting and transhipping ports

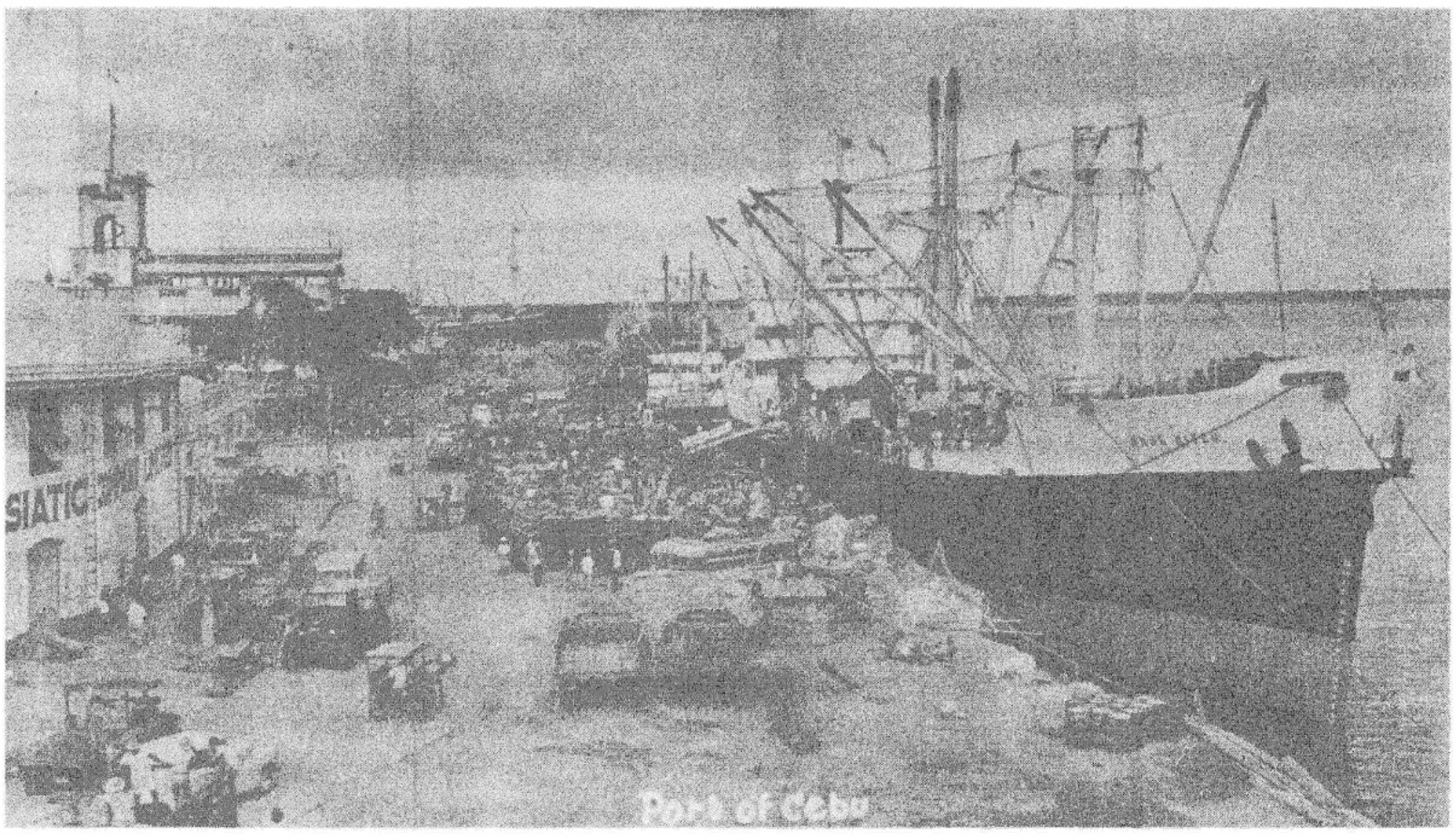


Figure 8: Interisland shipping at Cebus The large ship in the foreground (Snug Hitch) is a C-1 freighter operating under lease from the U. S. Maritime Commission.

Economic Factors:

The collecting and transhipping role which Cebu now plays in interisland commerce can be partially attributed to an outgrowth of economic-social conditions present on the island. The rather unfavorable agricultural environment of Cebu cannot support the large number of people living on the island. Excluding the essentially urban population of the city of Cebul(1948: 167, 000), there is a population density of approximately 2, 000 persons per square mile of rather poor cultivated land. Limited level land, excessively-drained coralline limestone soils, together with generally low rainfall (40 to 60 inches) have made it difficult or impossible to support Cebu's population from within the island. Insufficient food supplies and the need forloutside income with which to purchase additional food supplies encourage the Cebuanos tol capitalize on their site and strategic location.l Warehousing, sorting and grading, collecting and distributing and, above all, transhippinglfunctions provide supplementary income.

In response to or strongly influenced by the foregoing factors, Cebu has become the most important Philippine interisland port, surpassing all ports in total numbers and tonnages of vessels entering, amounts of corn and copra landed, and total inbound and outbound passenger traffic. Scheduled and non-scheduled ships connect Cebu with all important ports in the eastern and central Visayan Islands and in Mindanao (see Table XVI and Map 6).

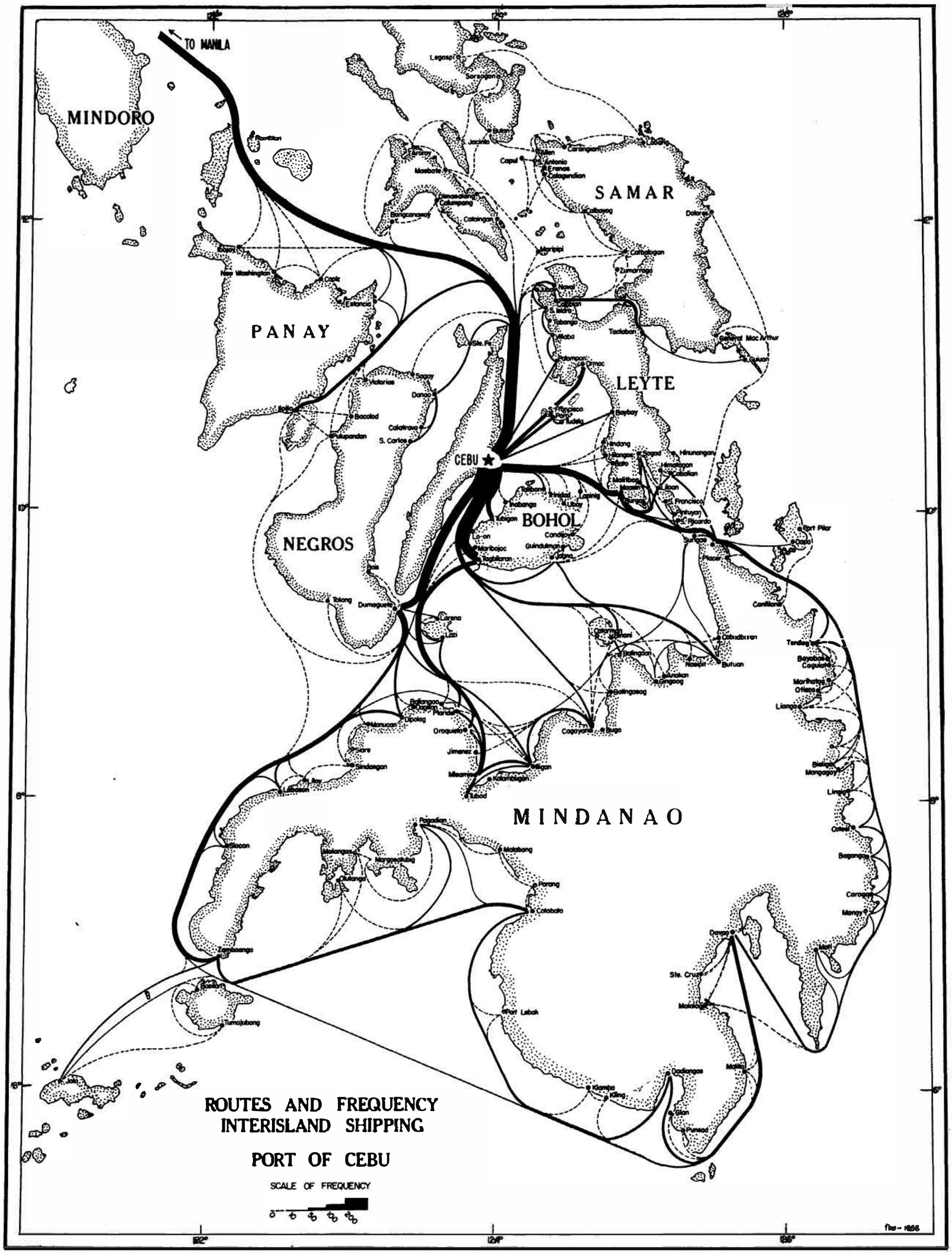
Table XVI: Inbound Interisland Shipping at the Port of Cebu, 1953-1954.

Month	Number of Entering Vessels	Gross Tonnage	Cargo Landed (tons)
October	777	337,1000	71, 000
January	738	328, 000	71,1000
May-June*	828	345,1000	78, 000

* A split month, May 15 - June 15, was chosen to consider trade patterns during the height of the drought period.

Interisland Trade Patterns:

The patterns of trade of the port of Cebu form three main streams. The most important movement involves the inbound shipments of interisland commodities. This stream consists of two major categories of cargoes: inbound food commodities for consumption on the island, and inbound cargoes destined for transhipment at Cebu for overseas markets. The second stream is provided by those shipments outbound from Cebu for ports within Cebu's trade area. The outboundlinterisland cargoes mainly consist of manufactured goods of foreign origin. The third flow of goods consists of foreign imports and exports.

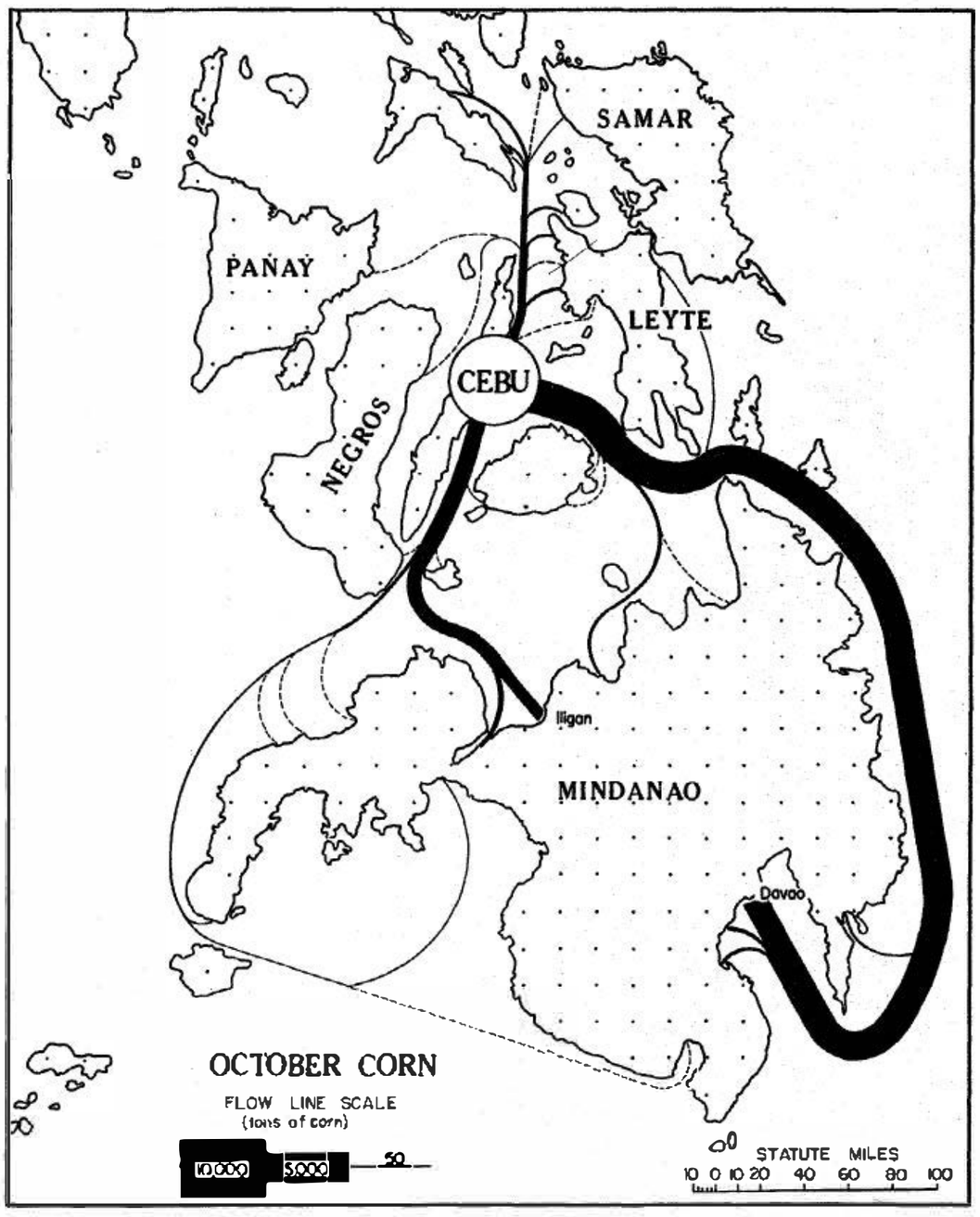


Map 6: Routes and frequency of inbound interisland shipping to the port of Cebu for a 31-day period May 16-June 15, 1954.

Inbound Interisland Trade (Food Commodities):

Inbound food shipments are intended to supplement the inadequate subsistence food production on the island of Cebu. Corn, and, to a lesser extent, rice, are the most important inbound food commodities.

Approximately 150,1000 tons of shelled corn annually move into Cebu, an amount of corn representing two times the annual production of corn on the island. Inbound corn shipments are relatively constant throughout the year, except for the period April through June which is corn planting season on the island of Cebu. During this period monthly corn shipments are doubled, totalling 18,1000 tons monthly. Mindanao with its expanses of good agricultural land and relatively sparse population supplies most of Cebu's corn (see Maps 7 and 8). Cotabato and Dadiangas, with their large

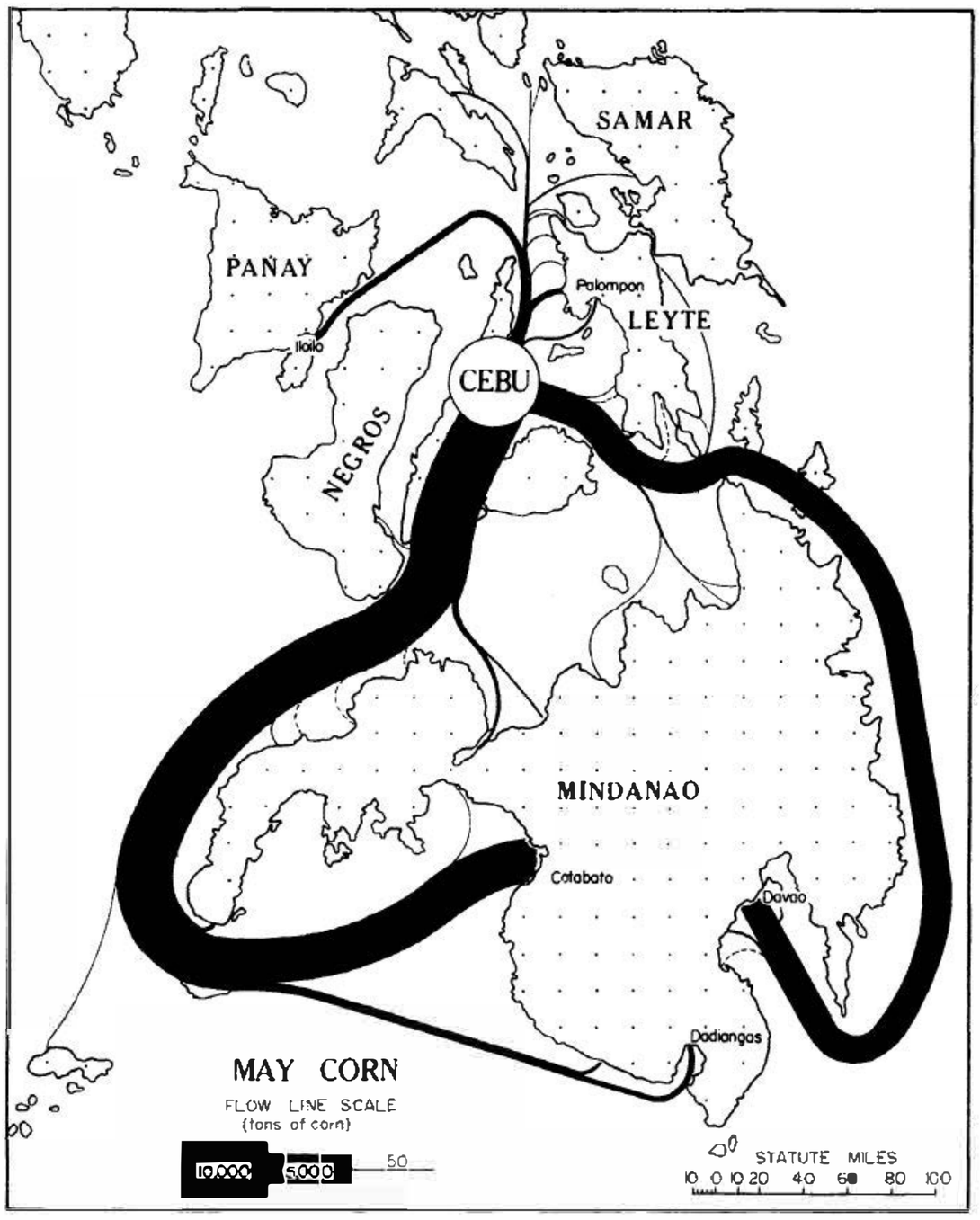


Map 7: Flow of corn (in tons) inbound to Cebu during the month of October, 1953.

agricultural settlement projects, and Davao, with its year-round rainfall and ability to produce two or three crops of corn within the space of one year, supply over sixty per cent of the corn. Iligan and Cagayan supply important quantities of corn from northern Mindanao.

Rice does not play as important a role in the diet of the Cebuanos as corn. Although local production is only 6,000 tons annually, inbound rice shipments amount to less than one-quarter those of corn (35,1000 tons). Inbound rice shipments show

greater seasonal variations than corn, closely reflecting the availability of seasonal surpluses in the various producing areast October rice shipments, when rice is relatively plentiful throughout the islands, are double those received during the main planting months of April through Junet Similarly January shipments are large, reflecting the harvest of the palagad or second crop of lowland ricet Rice trade patterns have similarities with corn in that the relatively empty, but productive, lands



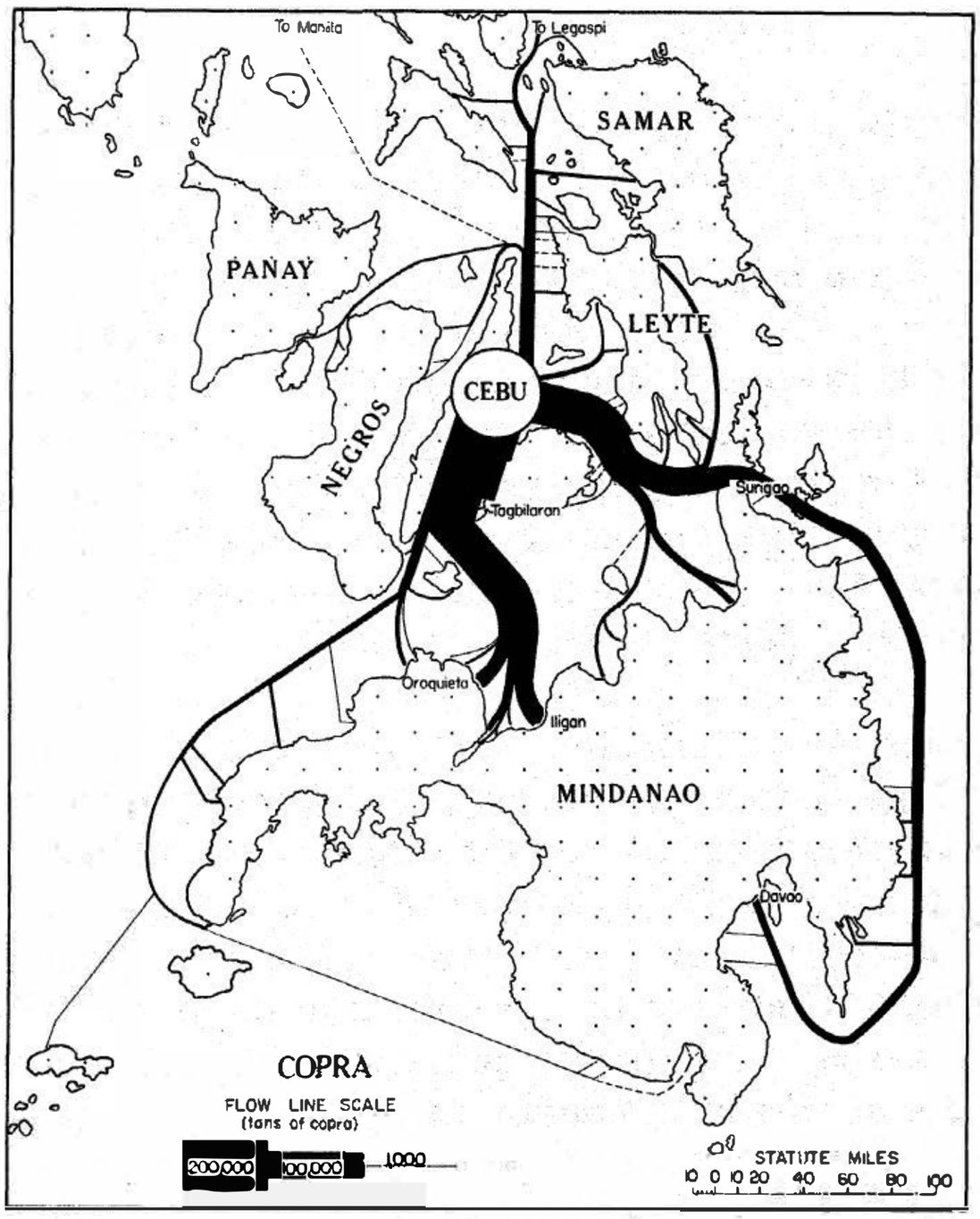
Map 8: Flow of corn (in tons) inbound to Cebu during the month of May, 1954.

of Mindanao are more important than other areas, supplying 48 per cent of Cebu's ricet However, Iloilo, Ormoc and Manila rank high during certain seasonst Surpluses in the Manila and Iloilo areas occur in the period September to Novembert Personal preferences and cost are important factors in the dominance of corn over rice.

The remainder of Cebu's inbound food commodities is comprised of a wide variety of Philippine-produced products, livestock, poultry products, fish, various fruits and vegetables, salt and numerous others. Only livestock shipments are sufficiently large to warrant individual consideration (1,400 head, monthly)t The greater portion of the livestock are swine, originating from ports on the island of Leyte. Inbound livestock shipments are relatively small, owing to the fact that hog-rearing is a significant secondary occupation on Cebu, and Cebu is an important supplier of swine for the urban markets of Manila (20,000 head, annually).

Inbound Interisland Trade (Export Commodities):s

Inbound interisland cargoes intended for transhipment at Cebu to overseas vessels far exceed in tonnage and value the inbound food cargoes destined for local consumption. Whilesabaca (Manila hemp) and lumber aresrepresented in significant quantities,sthey are completely eclipsed by the large movement of copra and other coconut products. Cebu is primarily a copra ports[3] Supplies of coconut and copra are brought into Cebu from producing areas in the eastern and central Visayas and from Mindanao (see Map 9). Coconut received at Cebu is transhipped as copra or



Map 9: Flow of copra (in tons) inbound to Cebu for the year 1953-54.

processed into dessicated coconut or coconut oil and copra cake (the residual pressings from the oil extractive process).

The emergence of Cebu as the Philippines' premier copra port is largely the result of its central location to producing areas and its reputation for quality copra. Copras

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[3]During 1953 Cebu shipped approximately 40 per cent of the total Philippine copra export. Manila ranked second as a copra port with 27 per cent.s Thesremainder of the 1953 copra crop was exported from dozens of smallsports scattered throughout the central and southern areass

and copraeproducts move into Cebu chiefly from northern Mindanao andenearby Bohol Island, ports for which Cebu provides the closest "open port." The drier climatic conditions found in the Cebu area are responsible for the production of a superior quality sun-dried copra. "Cebu sun-dried copra" is a mark of quality within a generally poor quality copra area. The factor of superior quality made Cebu an important port-of-call foreoverseas vessels, in turn stimulating Cebu'secopra collection function.

Copra shipments into Cebu show little seasonal fluctuation. Approximately 30,000 tons of copra enter monthly, and copra contributes over one-half of the total inbound interisland cargo tonnage.

Cebu does not rank high among Philippine ports in its receipts of abaca and timber. Approximately 300,000 bales (35,000 tons) ofabaca are landed from interisland vessels annually. A smaller quantity is eventually exported, the residue remaining on Cebu for local consumption. Cebu's abaca supplies come about equally from Mindanao and Leyte. The small ports of Baybay and Ormoc in western Leyte and the port of Surigao in northern Mindanao are the more important abaca sourcese for Cebu. Cebu is the closest "open port" to the western Leyte towns andthe most convenient "open port," in terms of regularly scheduled shipping routes, for the port of Surigao. The principal abaca producing regions of the Philippines, i.e., southeastern Luzon and Davao Gulf, lie at some distance from Cebu and ship the bulk of their abaca through the open ports of Manila andDavao.

Difficulty in handling most Philippine woods precludes transhipment inquantitye Generally, Philippine logs and lumber are exported directly from the ports nearest the dozens of logging operations scattered throughout the archipelago. Approximately 33,000,000 board feet of timber products are carried to Cebu annually, an amount equal to 3 per cent of the total Philippine production. Only a small portion of the incoming interislandetimber is intended for transhipment at Cebu to overseas vessels. The major portion of the timber is consumed on the island. Movements of inbound timber products show small monthly fluctuations. The port of Butuan on northern Mindanao is the chief source of timber for Cebu (40 per cent) with smaller shipments arriving from other logging operations in northern Mindanao and southern Negros.

Inbound food and exportable commodities furnish Cebu with the bulk of her interisland trade. The remainder of Cebu's inbound interisland trade is comprised of a multitude of various items, collectively termed "miscellaneous cargoes." The greater share of these miscellaneous cargoes are manufactured goods of foreign origin, e.ge, canned foods, textiles, metals and manufacturers and petroleum products. Since most Philippine imports are discharged at Manila, the bulk of Cebu's inbound miscellaneous cargoes come from that port. Cebu, in turn, redistributes these commodities to those ports within its trade areae

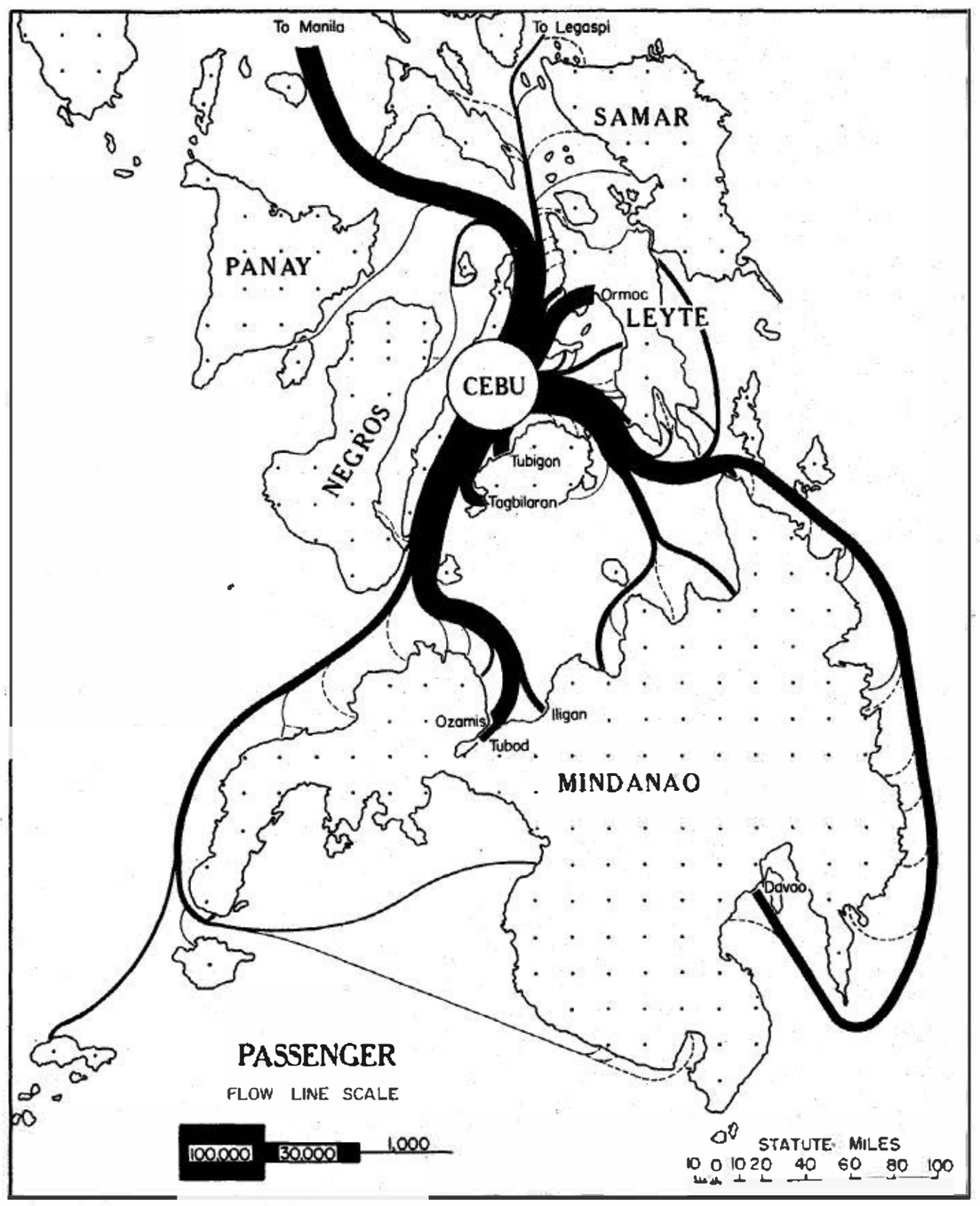
Outbound Interisland Trade:

The outbound interisland cargoes from Cebu consist mainly of manufactured goods, normally of foreign origine Cebu acts as the distributing center for the central and eastern Visayan islands and for northern Mindanao. Many Filipino firms have

established branch offices at Cebu to service the trade area of approximately five million people living on the islands of Negros, Cebu, Masbate, Bohol, Leyte, western Samar and northern Mindanao. Cebu often serves these areas as their only outside contact point.

Passenger Movements:

Movements of passengers in and out of the port of Cebu are quite large, especially in view of the fact that there are no areas near enough to constitute a commuting passenger source. Cebu's passenger influx is greater than at any other Philippine port, rather clearly reflecting local economic conditions and, at the same time, the importance of her central position with respect to the northern and southern Philippines. Approximately 250,000 passengers disembark and a similar number embark at Cebu annually, 50 per cent more than land or load at Manila, the Philippines' second passenger port. The greatest passenger flow is between the two ports of Cebu and Manila (14 per cent), a route connecting the nation's two largest cities. Ports on the island of Mindanao provide Cebu with approximately 36 per cent of the total inbound and outbound passenger traffic, particularly those ports located on Mindanao's northern coast. Leyte Island also bulks large in Cebu's passenger traffic, with the port of Ormoc ranking second to Manila (10 per cent) as a port of origin and destination (see Map 10).



Map 10: Flow of passengers to Cebu for the year 1953-54

The large passenger movements of the port of Cebu appear to have arisen from several factors. Many Cebuanos have left Cebu to pioneer agricultural areas on Mindanao and to supply labor for the abaca plantations in Davaol Others have found more favorable economic conditions in northern Mindanao, on Leyte or in Manila. Once a year every effort is made on the part of these emigrants to return to Cebu to attend town and barrio fiestas, or to visit relatives. Cebu's increasing importance as a commercial center for Mindanao and the Visayas has resulted in a stimulation of freight and passenger movements. Buyers come from outlying islands within Cebu's trade hinterland, or commercial representatives from Cebu leave for field contacts. The concentration of educational institutions in Cebu also contributes to interisland traffic through large student movements.

Export Trade:

The third major flow of trade for the port of Cebu is supplied by her overseas connections. Cebu ranks a poor second to Manila as an international port although its status has improved in the postwar decade, and should continue to improve at the expense of Manila. A total of 410 ocean-going freighters called at Cebu during 1953 to discharge 650,000 tons of import and load 360,000 tons of export cargoes. Manufactured goods of European or United States origin dominate imports. Cebu consumes a part of these imports, reshipping the remainder to ports within the trade area (see Table XVII).

Table XVII: Exports from the Port of Cebu, 19531

Copra and Coconut Products	283,1319	
Abaca	9,900	
Timber	12,1000	
Sugar	33,1378	(U.S., Japan)
Chrome Ore	5,912	(Japan)
Manganese Ore	3,238	(U.S., Japan)
Molasses	1,348	(Korea)
Tobacco	702	(Spain)
Shells	548	(U. S.)
Corn Gluton	456	(U. S.)
Kapok	106	(Japan)
Hide Cuttings	192	(Japan)
Rattan and Products	558	(U. S.)
Iron Ore	36	(U. S.)
Maguey	17	(Hongkong, Singapore)
Coal	7	(U. S.)
Crocodile and Lizard Skins	5	(U. S.)
Miscellaneous	146	
TOTAL EXPORT	361,1768	

Copra coconut products lead exports from Cebu in value and tonnage. During 1953, Cebu shipped 232,000 tons of copra. The United States was the principal buyer (49 per cent), although countries in Europe and South America took important

quantities. Cebu also made important shipments of other coconut products, including 25,000 tons of coconut oil (40% of Philippine exports), 7,800 tons of dessicated coconut (16%), and 18,000 tons of copra cake (57%)l All of the coconut oil and copra cake went to the United States and most of the dessicated coconut, except for small shipments to Canada.

Abaca exports from Cebu amount to 10,000 tons annually representing less than 10 per cent of Philippine abaca exportsl Japan and the United States were the principal countries of destination, although western European nations took important quantitiesl Timber exports left chiefly on Japanese vessels, largely because of their lower freight rate structure, destined for Japan orlthe United States. Most oflthe Cebu-produced sugar is exported to the United States, in accordance with existing Philippine-United States trade treaties with regard to Philippine sugar. Small quantities of "Class C" sugar are exported to Japan.

Summary:

The port of Cebu plays a key role in Philippine interisland trade and commerce. Largely because of its nodal geographical position, good harbor facilities and commercially oriented population, Cebu has developed into the leading interisland shipping and trade center of the nation.l At the same time, Cebu has become an important port-of-call for overseas vessels. Domestically produced food and exportable products move from the eastern and central Visayan Islands and from Mindanao to Cebu for consumption or transhipment overseas. Corn and rice furnish the bulk of the inbound food commodities; copra and coconut products comprise the bulk of products destined for overseas markets. Cebu is the principal copra port of the Philippines, exporting an amount equallto one-half of the total United States copra imports.

Foreign-origin products land directly at Cebu or arrive through transhipment at Manila for eventual distribution to population centers within Cebu's commercial hinterland. Cebu serves as the commercial center for eastern Negros, Cebu, Masbate, Bohol, Leyte, western Samar and northern Mindanao and various smaller islands, an area serving approximately twenty-five per cent of the Filipino population.

In its functions the port of Cebu closely resembles a small edition of the port of Singapore, concerning itself primarily with handling, forwarding, reshipping, breaking-bulk, sorting, grading, processing and distributing and collecting. Of course, in total amount of coastwise and foreign traffic handled it cannot compare with Singapore. Cebu's coastwise and overseas trade slightly exceeds that of the American port of Tacoma in volume.

The Port of Manila:

Manila is entrepot for the Republic of the Philippines. Through its port and har-

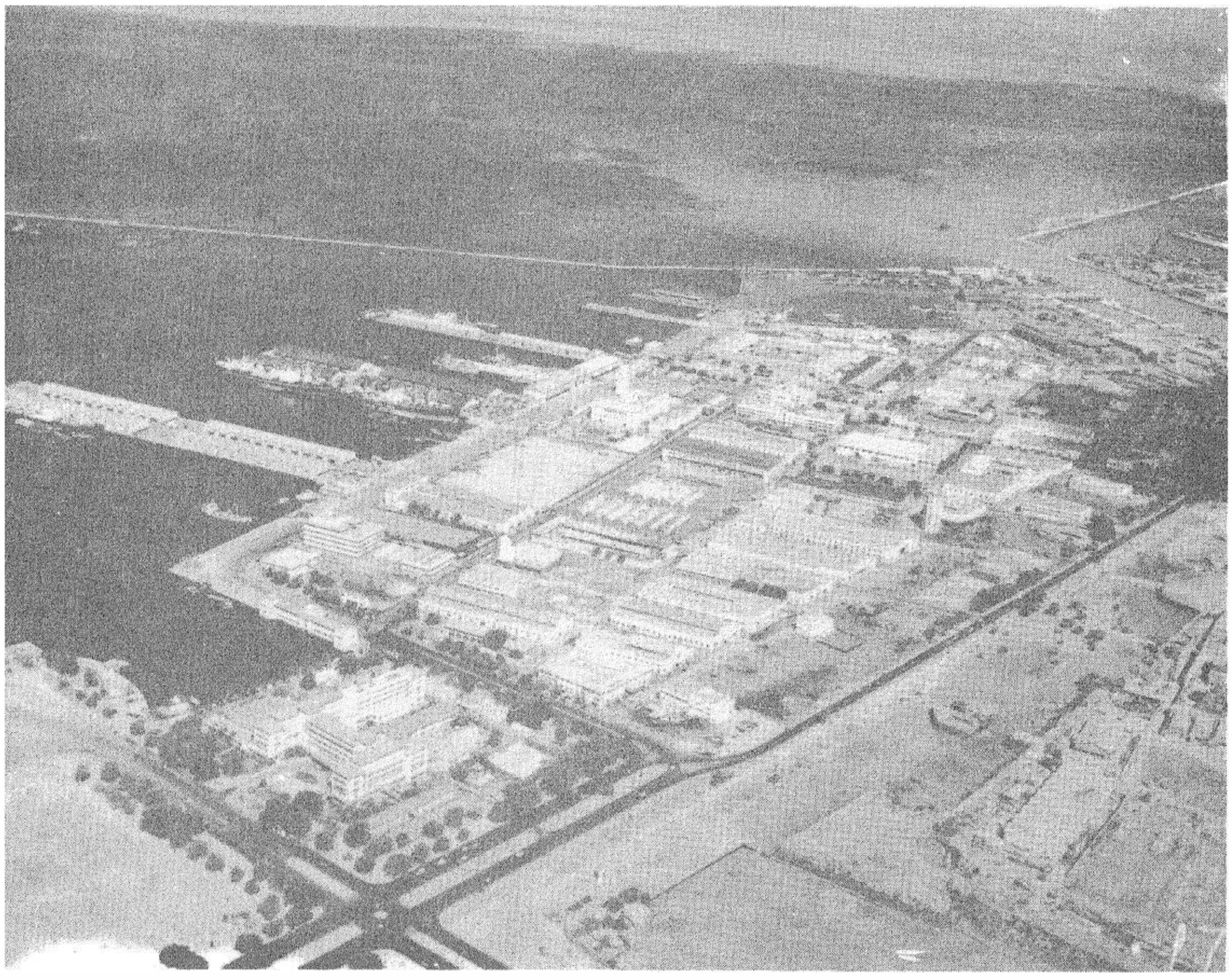


Figure 9: Facilities for overseas shipping at South Harbor, Manila.

bor facilities passes the vast bulk of the foreign cargoes in transit from overseas to destinations within the country. Similarly, a lesser share of the Philippine-produced goods intended for export and interisland cargoes for domestic consumption are received at Manila. Incoming interisland cargoes are sufficient, quantitatively, to rank the port of Manila second only to that of Cebu in Philippine domestic commerce (see Figure 9).

The city of Manila serves not only as the capital and only major metropolitan area of the Republic of the Philippines, [1] but also it is without peer as the financial and commercial center of the nation.

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[1] Technically this statement is incorrect since Quezon City, a suburb of Manila, is the officially designated capital of the Archipelago. Nonetheless, virtually all of the administrative functions of the federal government are conducted in Manila at present.

Historical Development:

Manila has developed to its present importance with respect to Philippine internal and external trade as the result of capitalizing upon a combination of advantageous geographical factorsa A magnificent natural harbor, second to none in the Far East,a coupled to a relatively numerous populace at an early date, made it a logical site for the establishment of the center of Spanish influence and administration in the Philippines, and in Eastern Asia. The city of Cebu was designated as the first Spanish capital in the Archipelago (1569), but its reign was short-lived. After serving only two years as the Spanish administrative center, Cebu saw its political functions permanently shifted to Manilaa Manila has retained its national political functions to this day. With the transfer of administrative functions went aacorresponding transfer of economic functionsa Manila soon became the only entrepot for theaexchange of Spanish silver from the Western Hemisphere and products from the mainland of Asia, particularly those from Chinaa This entrepot role,ain turn, gave initial impetus to the development of the famed "Manila galleon" trade with the Mexican port of Acapulco, a lucrative shipping service, with occasional minor financial reverses, which terminated western operations under the watchful eyes of the Spaniards in Manila.

Manila's rise to a position of economic dominance in the Philippines was essentially assured once the Spanish base of operations was shifted to it from Cebua It apparently has been able to maintain its position as the principal port of entry and distributing center of the Philippines with relative ease since 1571. aThat this dominance has been maintained despite a tumultous and eventful history which found the Portuguese and British, and even Chinese pirates,aat different periods standing at its very gates is tribute to Manila's natural advantages.a The eventual annexation of the Philippine Archipelago by the United States in 1898[2] did not alter the dominant political and commercial importance of Manila.

Site and Regional Location:

Paramount to Manila's continued dominance of Philippine commerce, particularly that of foreign commerce, has been the role played by its superb natural harbor (see Map 11). Manila Bay has roughly the outlines of a largeatriangle withathe base of the triangle to the east where the cityaand port of Manila and associated satellites are located (see Figure 10). The harbor encloses a water area of 770 square miles with maximum depths ranging from over 180 feet in the entrance to about90 feet in the middle and decreasing gradually to the shores. The constricted western exit out from the bay to the open waters of the South China Sea has deep water and is well-marked by navigational aids located on the small channel islands of Corregidor and Caballo. Located east of, and directly behind, the metropolitan area of Manila are the Central Luzon Mountains, whose lofty skylines and massive bulks partially block the full effects of the western Pacific Ocean storms.

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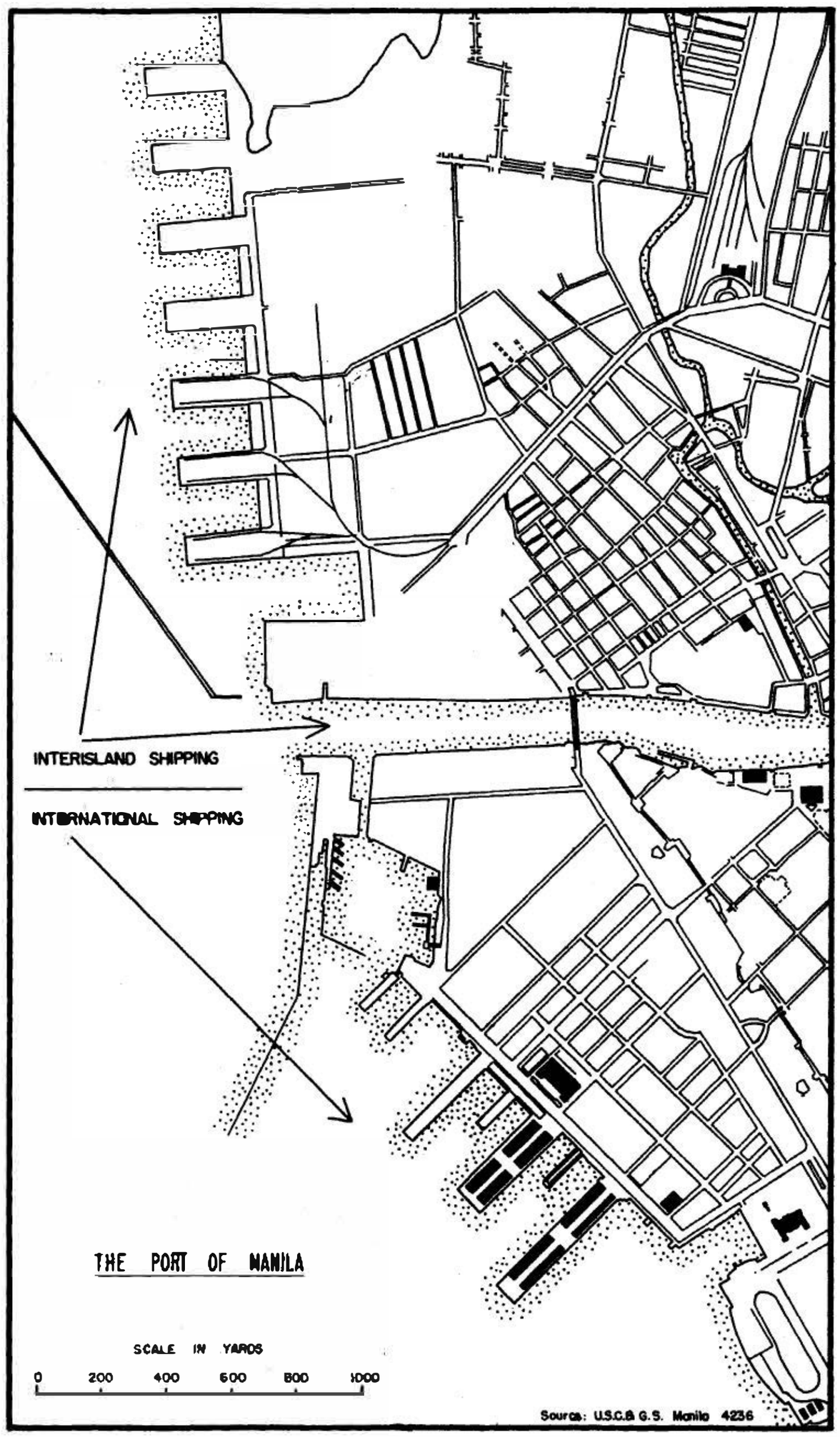
[2] An excellent history of the development of Manila, and indeed, that of the entire Archipelago, can be obtained from various volumesaof the Philippine Islands, 1493-1898, by E. H. A. Blair and J. A. Robertson, 55 vols. Cleveland, 1903-1909.



Map 11: The Port of Manila.

However, many splendid physical harbors in the world, lacking an accessible and productive hinterland, have withered "a-growing" -- not so Manila. In the larger sense, perhaps more figuratively than literally today, the entire Philippine Archipelago lies within the trade hinterland of the port of Manila. More correctly, the port of Manila lies at the juncture of two productive regions: 1) the Central Luzon Plain lying to the north, the "breadtbasket" of the Philippines, and producing large quantities of rice and export sugar particularly and 2) Southern Luzon, lying south of Manila, which produces export sugar, copra and coconuts and Manila hemp. Two rail links have joined these two productive hinterlands at Manila since 1906t Today modern highways parallel the rail lines, radiating out from them like trellis patterns (see Map 12).

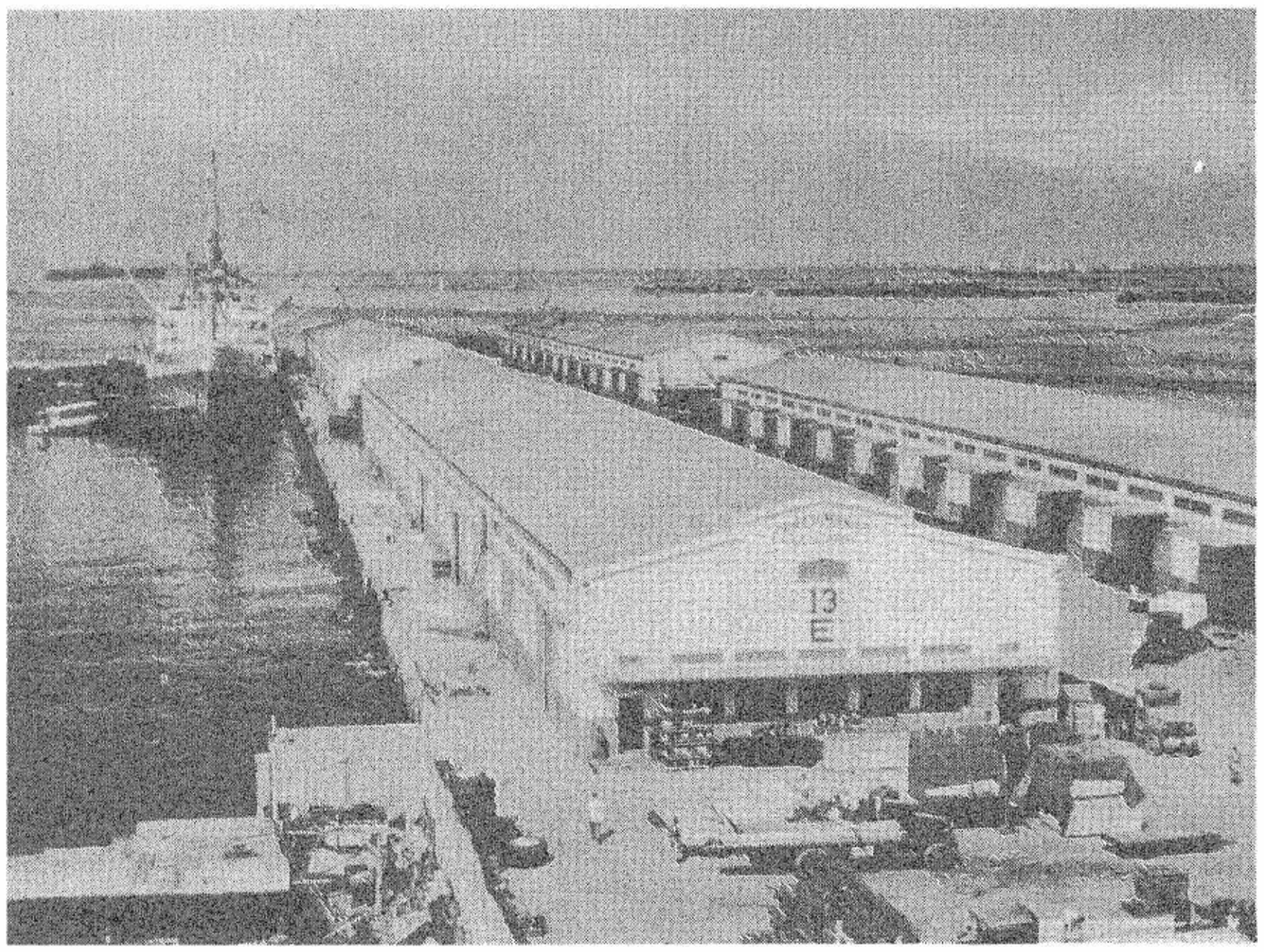


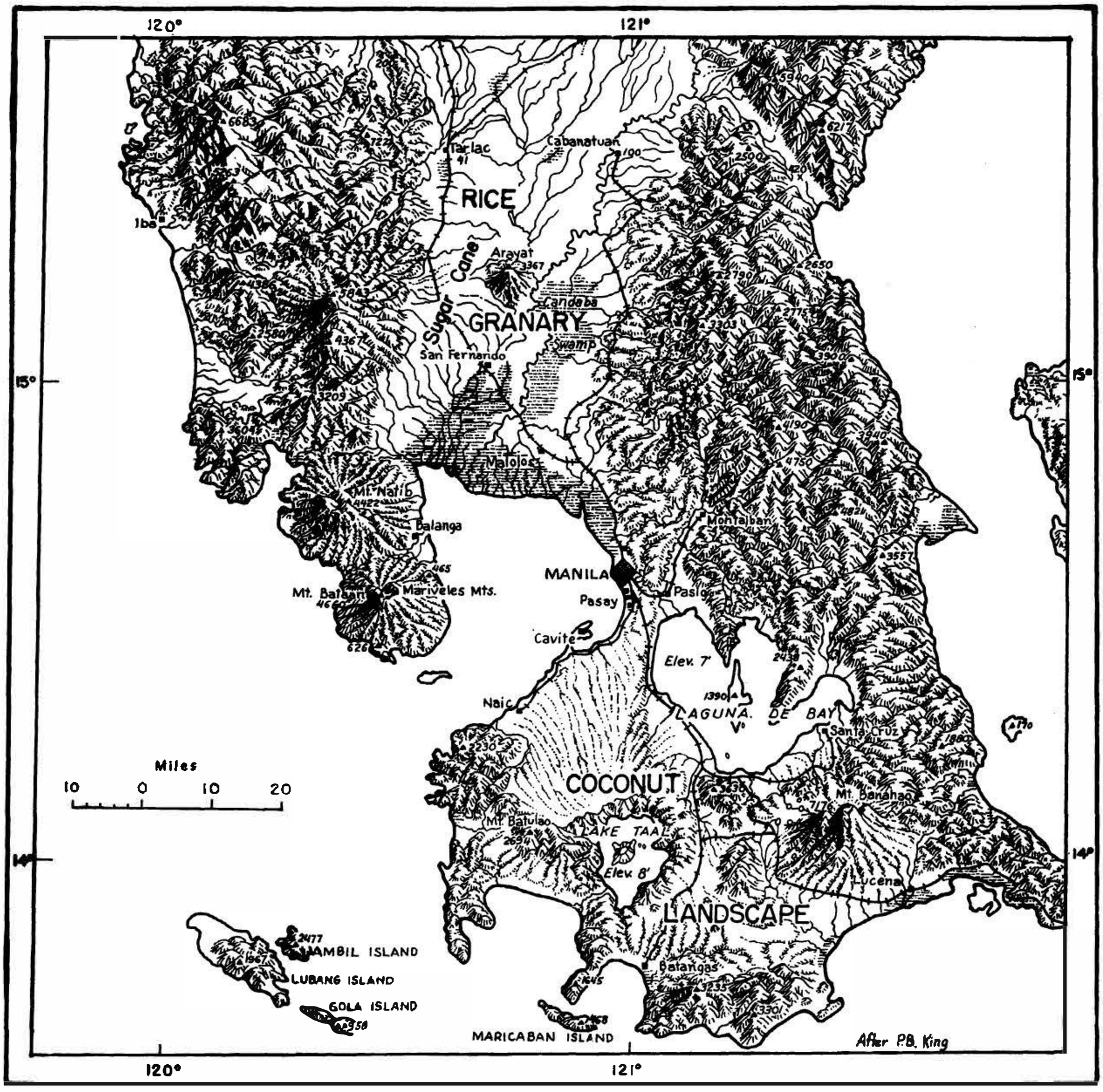
Figure 10: Pier 13, South Harbor, Manila.

The vast bulk of the commodities produced on the central and southern Luzon plains does not travel by interisland vessels and, hence, does not materially further Manila domestic water-borne commercea (Only that amount of Luzon-origin cargoes transported by watercraft are considered a part of this study)a

Frequency of Interisland Shipping:

Interisland vessels enter the port of Manila in numbers and gross tonnages sufficient to rank the port second only to that of Cebu in Philippine interisland shipping. Each month from 500 to 600 vessels of the interisland fleet, representing approximately 225,000 gross tons of shipping, enter the port of Manilaa Whereas ina gross tonnages of entering vessels the members of the core fleet are in majority, a surprising number of smaller, special-purpose vessels contribute significantly to overall port statistics. Vessels of this last category include large numbers of barges and other lighterage equipment, fishing vessels and numerous small sailing craft loaded primarily with timber from the island of Mindoroa

A large number of the vessels of the Philippine interisland core fleet terminate their operations at Manila where many of the home offices of the interisland shipping companies are located. Since Manila is the principal port of entry for the Philippines, the operators of interisland shipping have found it to their advantage to schedule operations through this port where the cargoes intended for archipelago distribution are transhipped. Company officials have also found it expedient to locate their administrative headquarters in the vicinity of the large foreign import and export firms and of the governmental officesa



Map 12: The regional location of Manila.

Manila draws its trade from the entire Archipelago, and, in a very real sense, the other Philippine interisland trading centers operate in the shadow of the port of Manilae There are, in essence, two types of trade hinterlands for Manila; 1) those which only Manila serves, and 2) those for which Manila competes, with diminishing success, with other major interisland portse

The primary hinterland for the city of Manila lies on the main island of Luzon, both to the south and to the north of the city, and on the nearby islands of Palawan, Mindoro and the islands of the northern Visayanse For these regions Manila provides virtually the only contact with the remainder of the Archipelago and with the overseas world. The ports of entry of Jose Panganiban,e Legaspi-Tabaco and San Fernando (La Union), which are also located on Luzon, collect and distribute commodities further for Manila and, hence, are commercially tributary to it.

The secondary hinterland of Manila, the remainder of the Archipelago,1 is a trade area which is slowly, but surely, slipping from Manila's economic control. Owing to its historical primacy, i.e., as the first, and for long, the only Philippine port of entry, Manila was able to channel virtually all export and import cargoes through its facilities. Even today the Manila port handles the bulk of the Philippines' overseas trade, quantitatively and from a value standpoint. However, recent chinks have begun to appear in Manila's economic walls. The control over copra export has passed to Cebu, increasingly greater quantitieslof sugar are being exported directly from small ports located in the sugar-producing areas on the islands of Negros, Cebu and Panay, and the vast bulk of timber and mineral exports are being shipped directly from production sites scattered through the Archipelago. Imports, too, are being discharged directly at Cebu, Iloilo and other ports of entry in ever-increasing amounts.

Manila's connections with the central and southern Philippines, however, arel still widespread andltenacious (see Map 13). Operations of the interisland core fleet tie virtually all Philippine ports to that of Manila. The major shipping routes from Manila to the central and southern Philippines ports go by way of the central Philippinesports of Cebu, and to a much lesser extent, Iloilol Approximately one hundred monthly sailings link the ports of Cebu and Manila; some thirty monthly sailings link Iloilo to Manila. From the two Visayan ports of Cebu and Iloilo, fleet operations radiate east, west, andlmostlimportantly, south to the island of Mindanao.l

Those vessels not considered a part of the corelfleet confine the majority of their operations to somewhat independent and looselscheduling operations with ports on Mindoro, along the immediate coasts of Luzon to thelnorth and south of Manila and to commercial fishing operationslin waters off the island of Palawan and in the Visayan Sea. Although frequent, theselconnections do not represent dependable servicel

The lack of shipping operations north of Manila seems incongrous with the frequency of southern connections, particularly in light of the known productivity of northern Luzon (see Map 13). Northern Luzon is reasonably well-endowed with overland communications and, hence, need not depend as stronglylupon water transport as do the portslIying south of Luzonl Only one interisland shipping company maintains scheduled sailings to the Cagayan Valley of northern Luzon and to the small islands off Luzon's northern coast.[3] Several special cargo vessels maintain services to the northern areas upon demand.

Food Commodities (Interisland):

The great need for outside supplies of subsistence commoditieslfor consumption by the urban population of Manila is not apparent from a cursory perusal oflshipping

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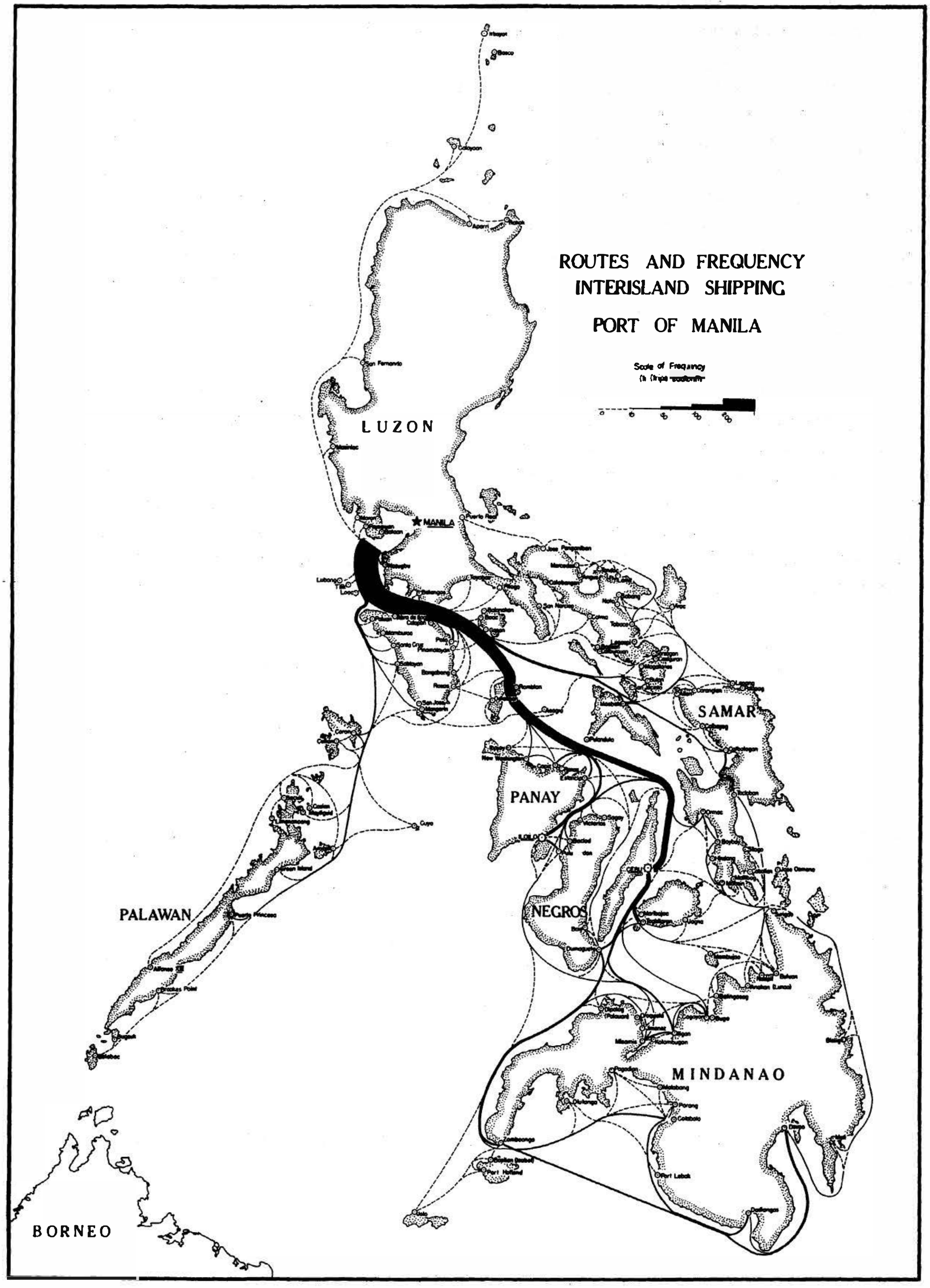
[3]Madrigal Shipping Company, Incl normally operates two or threelvesselslon the route from Manila to Aparri and the Batanes Islands.



Map 13: Routes and frequency of interisland shipping inbound to the port of Manila for a 31-day period May 16-June 15, 1954.

statistics. Withla greater metropolitan area population approaching 1,500,000 persons and with essentially no internal food productive capacity, the city of Manila requires large and dependable outside sources of rice, corn, livestock,l fish and the manylother commodities for table usel Fortunately for Manila, productive areas lie relatively close at hand on the Central Plains and in southern Luzon. An adequate tie is provided between these areas and Manila through the mainline tracks of the Manila Railroad Company and a fairly dense network of all-weather highways. The bulk of the daily necessities reaches Manila overland. Important though the overland shipments be, the interisland fleet still transports significant quantities of food commodities to Manila (see Table XVIII).

That part of Manila's fish supply which is not produced locally in Manila Bay's extensive fish pond industry,[4] an amount approximately 10,000 tons annually, is brought from fishing grounds primarily in Palawan and Visayan waters by the rather large commercial fishing fleet. Whereas these vessels primarily engaged in commercial fishing operations do not constitute an integral part of the interisland shipping fleet, their operations in distant waters do imply interisland movements of an important trade item and their vessels pass by way of major interisland shipping routes. It is impossible to state more thanlan intelligent estimate as to the total numbers of vessels engaged in commercial fishing operations from a base at Manila.

Table XVIII: Selected Food Supplies of Manila, 1953-54.

Commodity	Water (tons)*	Rail (tons)**
Corn	23,128	--
Rice	59,1408	30,1831
Livestock	229,1480 (head)	28,709 (head)
Fish	10,613	--

*Annual quantities equal totals of three sample months multiplied by four.

**Totals arelfor total car loadings of Manila Railroad by commodities and do not represent traffic figures for unloadings at Manila, Statistical Bulletin of Central Bank.

The non-recurrence of individual fishing vessels from one month to another suggests a large potential fishing fleet operating sporadically. Vessels actually operating from Manila, and those of a suitable tonnage not elsewhere serving interisland trade

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[4]W. E. McIntyre,l "Philippine Fish Culture,l" The Scientific Monthly, LXXVIII (2), February, 1954. pp. 86-931

needs, number approximately 363 vessels aggregating 19,000 gross tons.[5] Of the potential number of fishing vessels, approximately 150 vessels, representing over 9,000 gross tons of shipping, enter Manila monthly, bringing approximately 750 tons of fish. The great majority of the commercial fishing vessels operate in the waters surrounding Palawan Island with a lesser number engaged in operations in the Visayan Sea north of the island of Panay and in the waters off southern Mindanao and southeastern Luzon (see Table XIX).

In addition to the fish cargoes landed at Manila by commercial fishing vessels, modest quantities approximately 125 tons monthly arrive on regular interisland trading vessels from fishing communities in southern waters.

Table XIX: Monthly Cargoes of Fish Landed at Manila by Commercial Fishing Vessels, 1953-54.

Visayan Waters	41 tons
Mindanao Waters	100 tons
Southern Luzon Waters	1 ton
Palawan	609 tons
Others	4 tons
Total	754 tons

The interisland shipping fleet is instrumental in supplying Manila with important quantities of rice, corn and livestock, the mainstays of the Filipino diet. Annual shipments of approximately 60,000 tons of rice, 20,000 tons of corn and 230,000 head of livestock, chiefly swine, contribute significant tonnages to Manila's interisland port operations and to Manila's subsistence.

Supplies of rice, corn and livestock are shipped to Manila from all of the major islands in the Archipelago, at least during certain seasons. Major originators of Manila-bound rice shipments include, in order of descending importance, Cotabato, Misamis, Aparri, Iloilo, Dadiangas, Davao, Cebu and Iligan (see Map 14).1 About 36,000 tons or 60 per cent of the rice cargoes arriving at Manila by water transport come from ports located on the large southern island of Mindanao where lightly settled, but productive, agricultural lands produce large surpluses. The quantities of rice shipped to Manila vary seasonally; shipments are particularly heavy during the month of October when overland shipments of rice arriving at Manila are at their lowest point1 Ports on the island of Mindanao originate Manila-bound rice shipments throughout the year, but larger shipments occur during the late fall harvesting months. Areas within the Visayan Group, particularly the port of Cebu which, in turn, collects corn from its hinterlands, ship more evenly throughout the year although quantities

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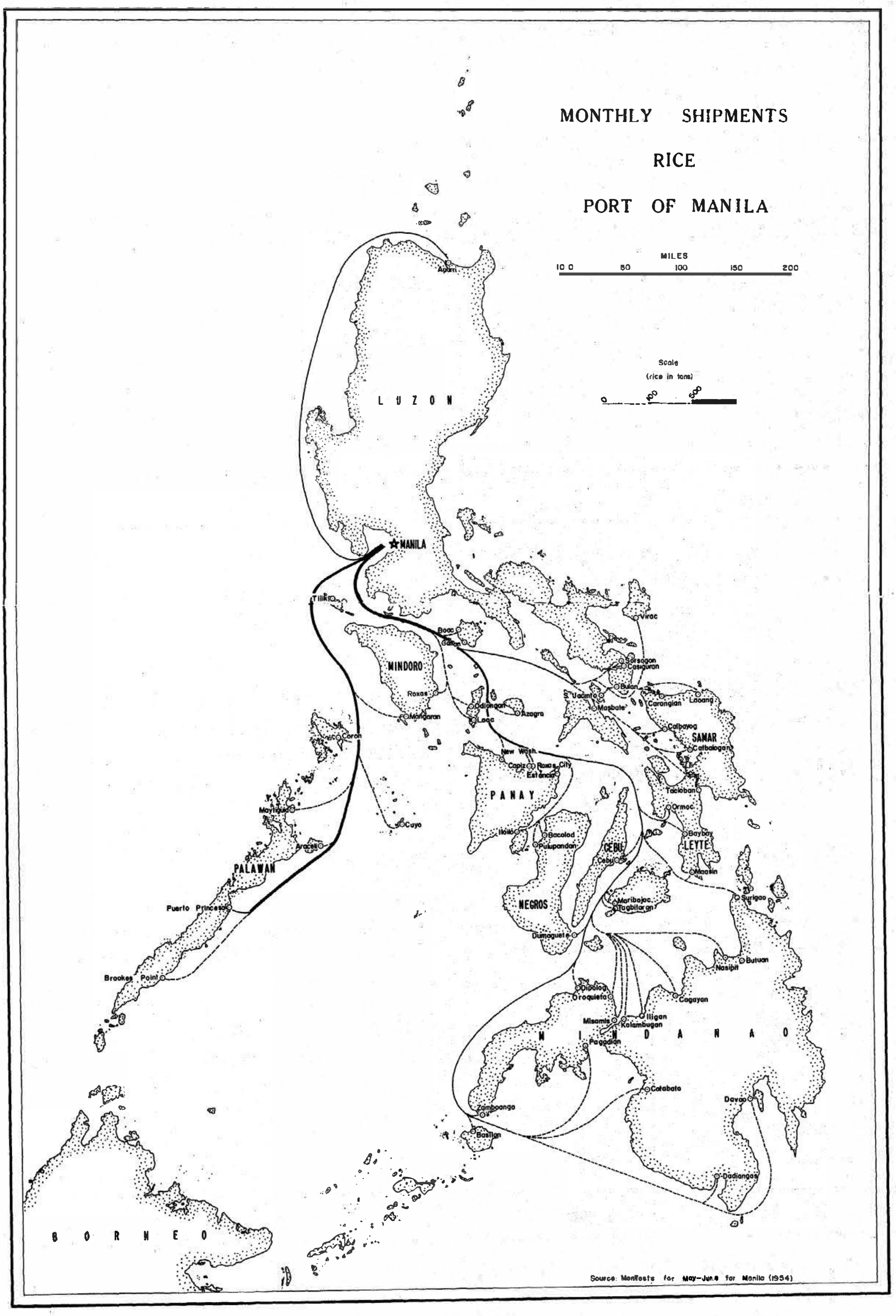
[5]Fishing vessels operating in Palawan, Visayan and southern Luzon waters from Manila average between 50 and 100 gross tons. Fish cargoes landed in Manila from these vessels, depending upon opportunities, vary between two to twenty tons.



Map 14: Flow of rice (in tons) inbound to Manila during the 31-day period May 16-June 15, 1954.

in the fall are more important. Aparri, in northern Luzon, starts important shipments in May and June, continuing them onjinto the late months of the year (see Table XX).

Table XX: Rice Shipments to Manila, 1953-54 (in tons).*

Originating Region	May-June	October	January	Annual**
Northern Mindanao	36.8	3,034.1	360.0	13,723.6
Southern Mindanao	95.8	4,962.2	638.3	22,785.2
Visayan Islands	209.8	1,818.9	736.2	11,059.6
Mindoro	27.3	403.3	146.4	2,308.0
Palawan	351.4	63.8	33.4	1,794.4
Southern Luzon	22.1	28.5	1.6	208.8
Northern Luzon	1,243.2	520.8	118.2	7,528.8
TOTAL	1,985.3	10,831.6	2,034.0	59,403.6

*One sack of rice is computed as 56 kilos.

**Annual quantity is computed as the sum of the three monthly totals multiplied by four.

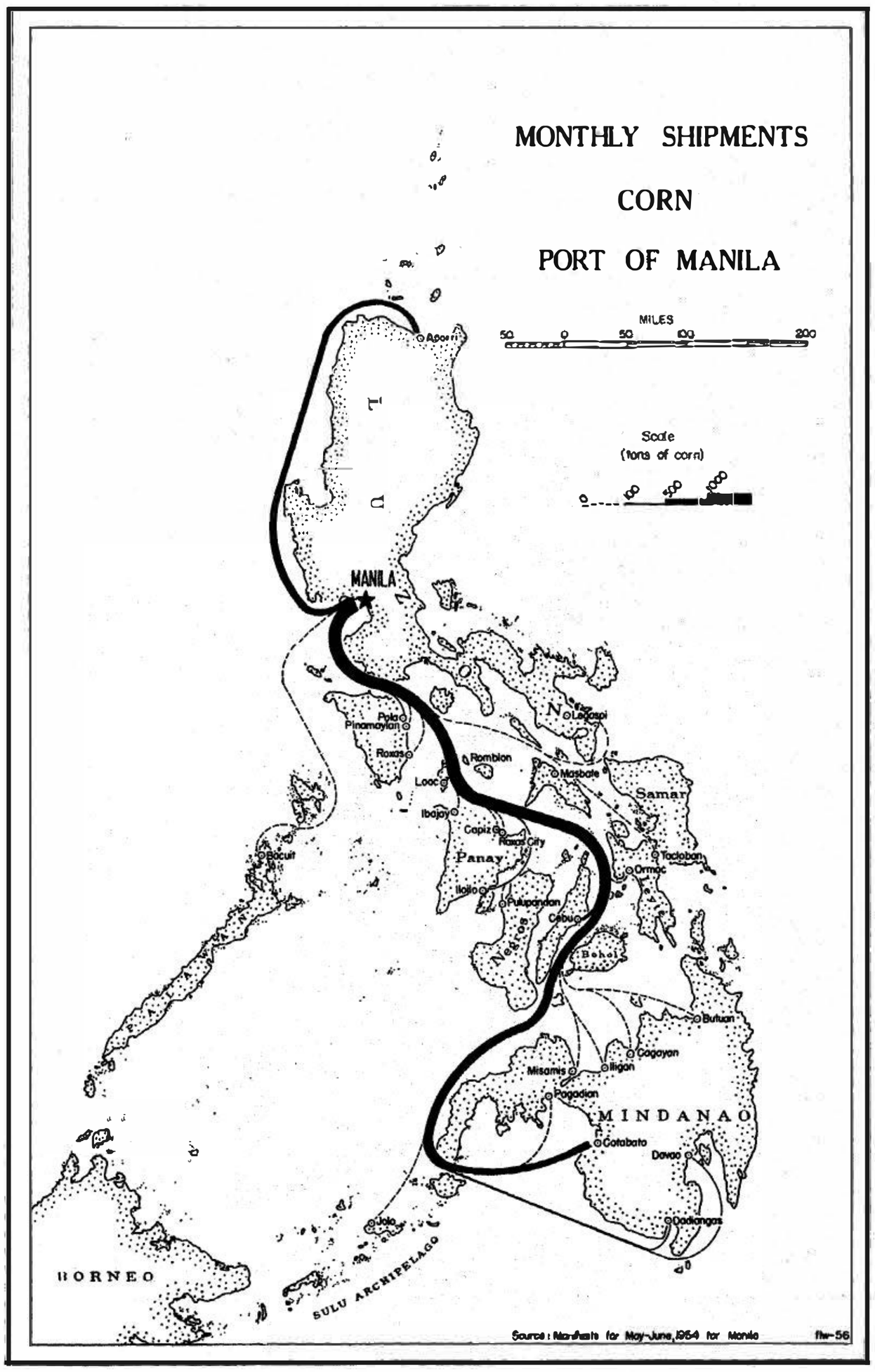
Essentially no cornlis transported to Manila overland since very little corn is cultivated near Manila. Shipments of corn to Manila, principally in the form of corn grains, do not exhibit as great a seasonality in flow as do the rice shipments although individual ports reflect the seasonal agricultural rhythm of their hinterlands.

Table XXI:l Corn Shipments to Manila, 1953-54 (in tons)*

Originating Region	May-June	October	January	Annual**
Northern Mindanao	146.2	97.8	577.4	3,285.5
Southern Mindanao	853.5	410.4	231.6	5,981.8
Visayan Islands	536.0	51.4	1,291.8	7,516.6
Mindoro	351.9	0.6	54.5	1,628.2
Palawan	12.3	32.5	70.8	462.2
Southern Luzon	--	--	--	--
Northern Luzon	560.1	438.4	48.5	4,187.8
TOTAL	2,460.0	1,031.1	2,274.6	23,062.1

*One sack of corn is computed as 57 kilos

**See Table XX.



Map 15: Flow of corn (in tons) inbound to Manila during the 31-day period May 16-June 15, 1954.

Livestock are transported by water to Manila in large numbers, principally from ports in the Visayan Islands.[6] Cebu serves as the most important port of origin for the livestock shipments to Manila (see Map 16). The larger share of Cebu's livestock is swine, which, in turn, has been collected from secondary ports within Cebu's

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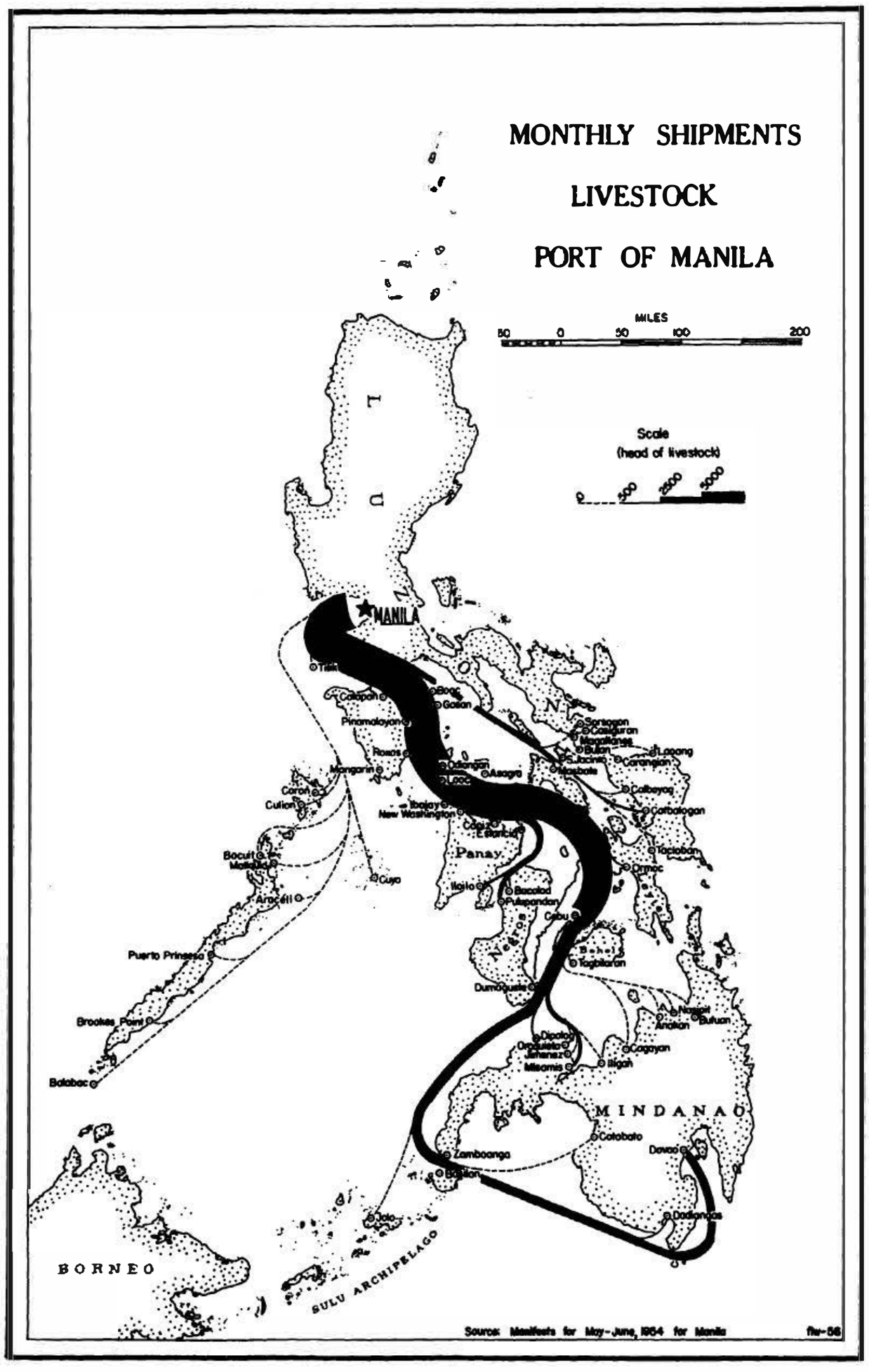
[6]A total of 28,709 head of livestock are shown on waybills of the Manila Railroad for 1952. 1608 tons of cattle and hogs were reported as slaughtered in Manila in 1952. Statistical Bulletin of the Central Bank of the Philippines, 1953-54.



Map 16: Flow of livestock (head) inbound to Manila during a 31-day period May 16-June 15, 1954.

hinterland. Mindanao Island also makes important contributions to Manila's meat supply, largely in the form of cattle, with the port of Davao serving as the principal originator, followed by the ports along the coasts of Misamis Oriental, Misamis Occidental, Cotabato and Zamboanga (see Table XXII).

Table XXII: Originating Ports for Livestock Shipments to Manila, 1953-54.

Originating port	Number of livestock (head)	Per Cent of Total livestock
Cebu	79,000	34.3
Davao	20,000	8.7
Iloilo	15,000	6.5
Misamis	14,000	6.1
Catbalogan	12,000	5.2
Masbate	12,000	5.2
Pulupandan	11,000	4.7
Other portsa	57,000	29.3
TOTAL	230,000	100.0

Export Commodities (Interisland):

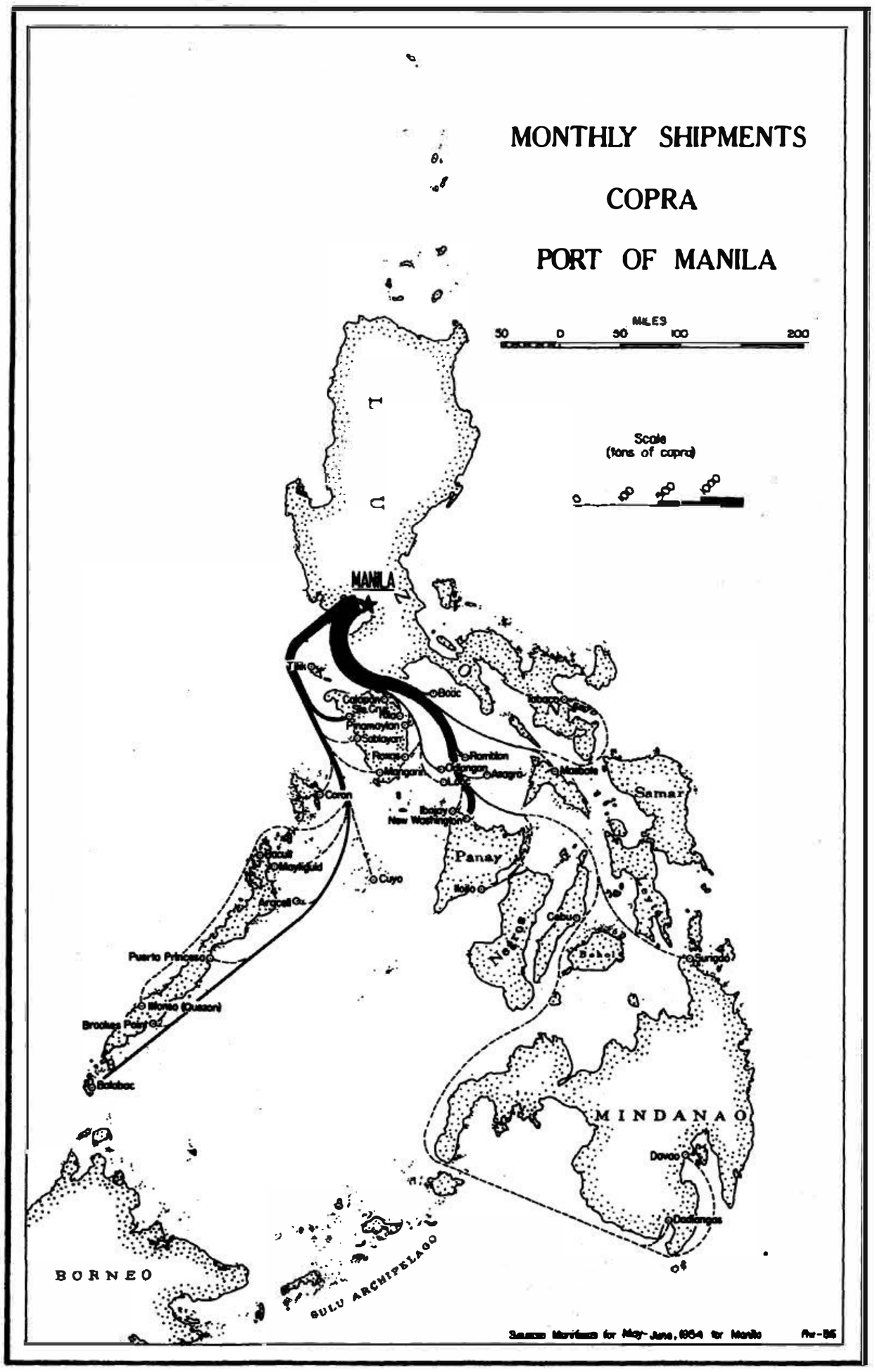
The four commodities of copra and other coconut products, sugar, logs and lumber and Manila hemp dominate overseas exports from the port of Manila, both in terms of quantity and valuea Large quantities of these export products are brought to Manila by both overland and water carriers for transhipment (see aTable XXIII). Excepting the movements of Manila hemp, which come from ports scattered throughout the Archipelago, the supplies of the major export commodities come from a clearly defined immediate trade hinterland of the port ofaManila.a

Table XXIII: Major Export Commodities Reaching Manila for Transhipment, 1953-54.*

Export Commodities	Manila R.aR.a	Interisland Shipping
Copra and coconut	31,562 tons	28,000 tons
Sugar	--	118,000 tons
Sugar	70,534 tons	110,000 tons
Sugarcanea	142,885 tons	--
Molasses	7,220 tonsa	--
Hemp	1,057 tonsa	95,662 tons
Forest products	157,767 tons	--
Lumber	--	97,603,300 Bd. ft.

*Coastwise manifests and Statistical Bulletin of the Central Bank.

Ninety per cent of the copra shipments landed at Manila from interisland carriers originate either on the island of Luzon or from ports located on theaneighboring islands of Palawan, Mindoro or from some of the smaller islands of the northern Visayan Group (see Map 17). Manila does not receive all of the copra produced in this hinter-



Map 17: Flow of copra (in tons) inbound to Manila during a 31-day period May 16-June 15, 1954.

landt Significant quantities of the copra produced in this hinterland leave the Philippines directly through the ports of Legaspi (27, 500 tons annually), Jose Panganiban (18, 100 tons) and Tabaco (17,t300 tons), together with small shipments from perhaps a dozen smaller direct export portst.[7] The port of Cebu also competes rather strongly for available copra supplies from within Manila's trade area.

Large amounts of timber cargoes, i.e., logs and lumber, enter Manila on vessels of the interisland fleett Although important quantities of timber products originate

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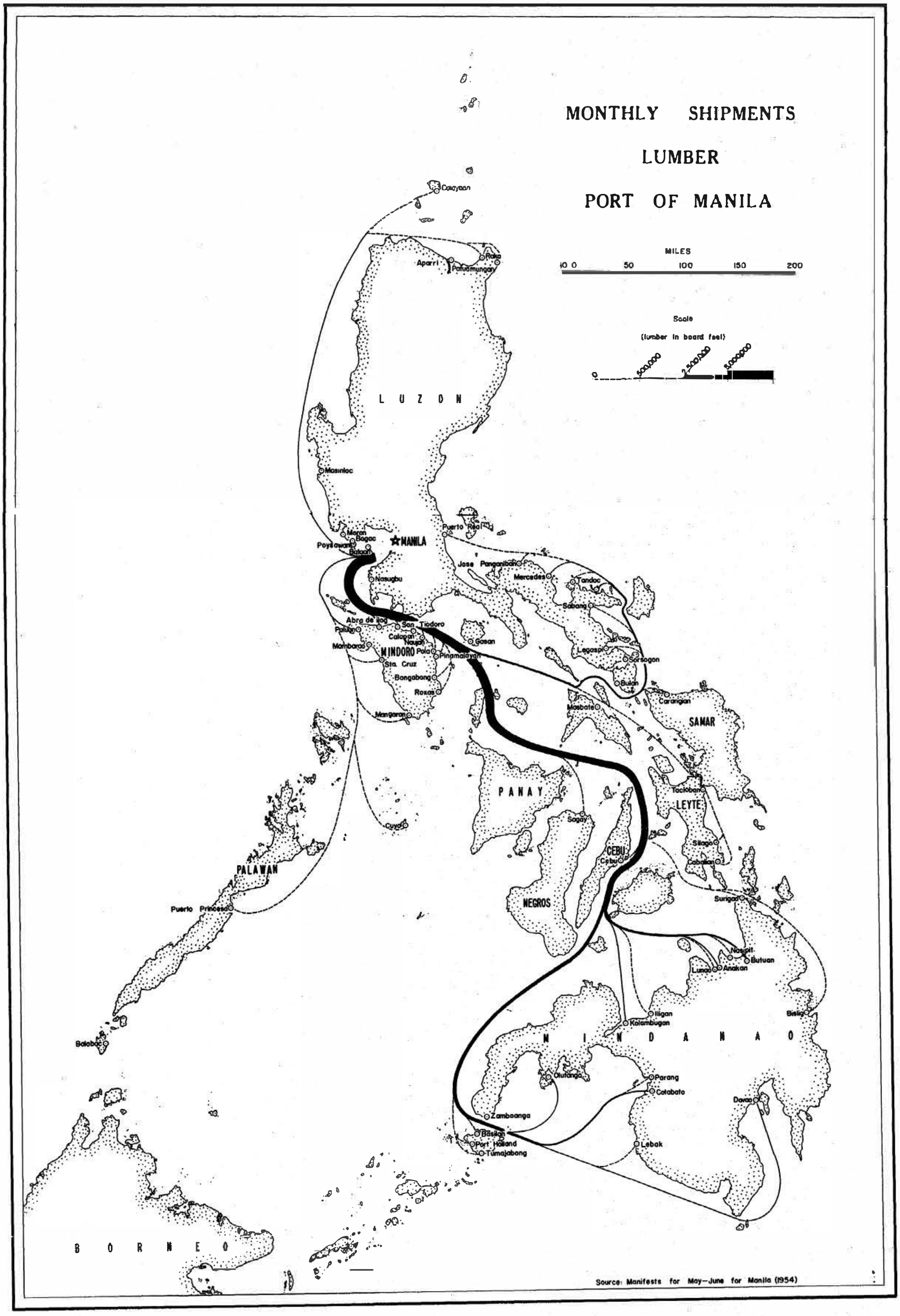
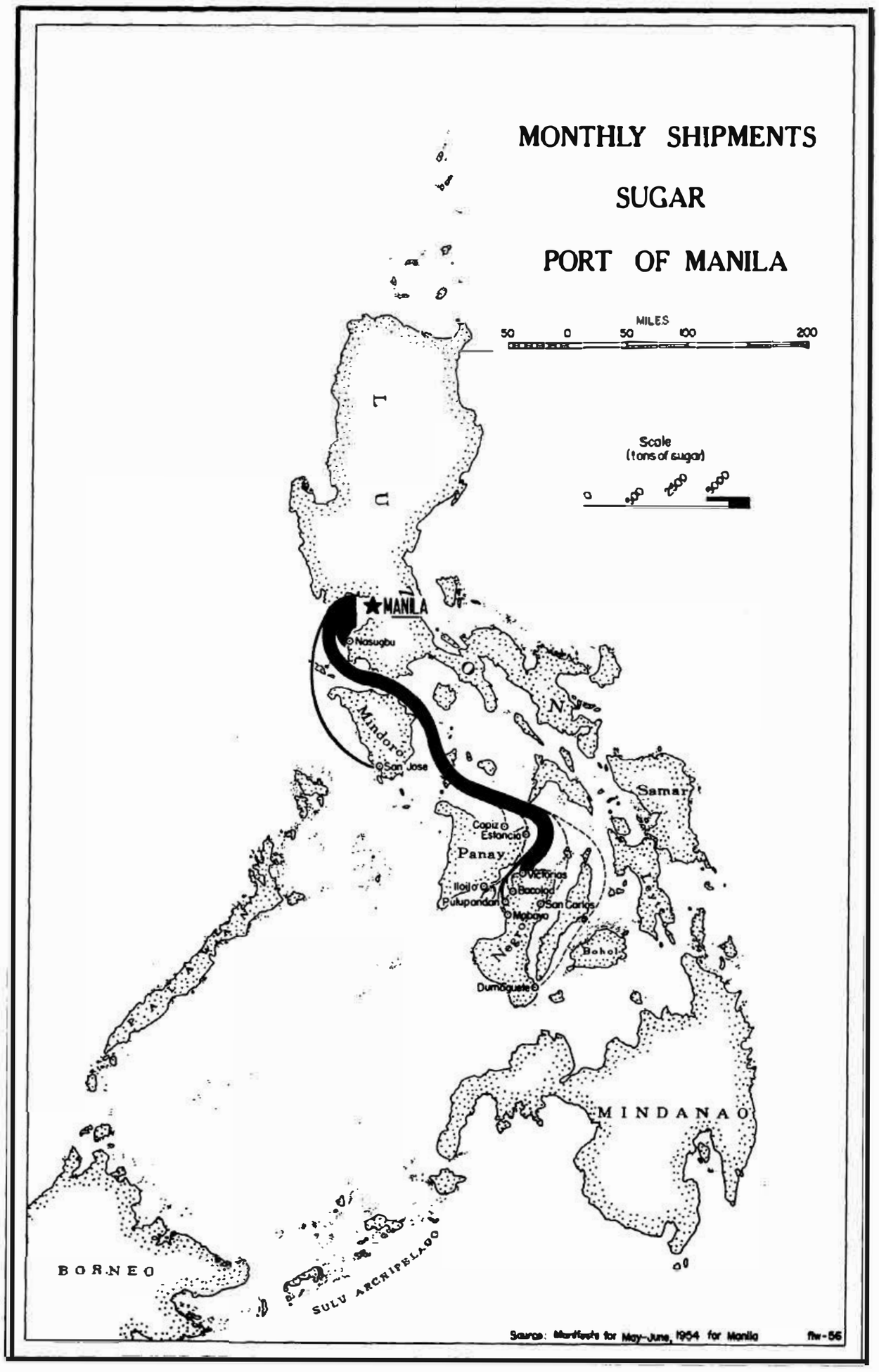
[7]Masbate, Bulan, Sia-in, Lamitan, Romblon, etct



Map 18: Flow of timber products (in board feet) inbound to Manila during a 31-day period May 16-June 15, 1954.

from ports as far south as southern Mindanao, a significant portion comes from Mindoro (see Map 18). Contrary to conditions with regard to the other commodities arriving at Manila, most of the Mindoro-produced lumber arrives on small sailing vessels with average capacities of from 10,000-20,000 board feet. Fully 30,000,000 board feet of logs and lumber annually reach Manila from ports on the island of Mindoro transported by these vessels. These sailcraft transport approximately one-third of the 97,000,000 board feet of timber products entering the port of



Map 19: Flow of sugar (in tons) inbound to Manila during a 31-day period May 16-June 15, 1954.

Manila annually from all Philippine ports. Units of the interisland core fleet, together with vessels, normally LCTs owned and operated by the timber companies, transport the bulk of the remainder of Manila's forest product supplies. Ports on the island of Mindanao, chiefly the ports of Butuan, Anakan and Cotabato, provide the greater share. Important quantities also originate from southeastern Luzon, in particular from the ports of Tandoc and Lamit, and from the Zambales area of western Luzon.

Shipments of timber products are remarkably regular and show small seasonal fluxuationss

The important quantities of sugar entering the port of Manila come from sugar-cane growing areas on Luzon, immediately south of Manila in Batangas Province, and from the Visayan Islands (see Map 19). Nasugbu on Luzon and Victorias and Pulupandan on the island of Negros are the major sugar-originating ports for the Manila-bound sugar cargoes. Since Negros Island produces approximately two-thirds of the total Philippine sugar crop, it is to be expected that ports on that island figure most importantly in Manila's inbound interisland sugar. The port of Victorias, serving the Victorias Sugar Milling District on Negros, the only Philipping sugarcane region milling cane essentially year-round, supplies Manila with the largest quantity of sugars Victorias originates about one-half (55 per cent) of the approximately 115,000 tons of sugar reaching Manila by water annually, viz. Nasugbu (24 per cent) and Pulupandan (15 per cent).s Barges of from 200-500-ton capacities generally are utilized to transport sugar.s Shipments of sugar into Manila are particularly large during the months of May and June and reach a minimum early in the years In addition to the large quantities of sugar moving as interisland cargoes to Manila for export are the significantly large tonnages entering the ports of Iloilo or Cebu for transhipment or directly exported from production sites. Manila also receives large quantities of sugar via overland transport facilities from its contiguous hinterland (see Table XXIII).

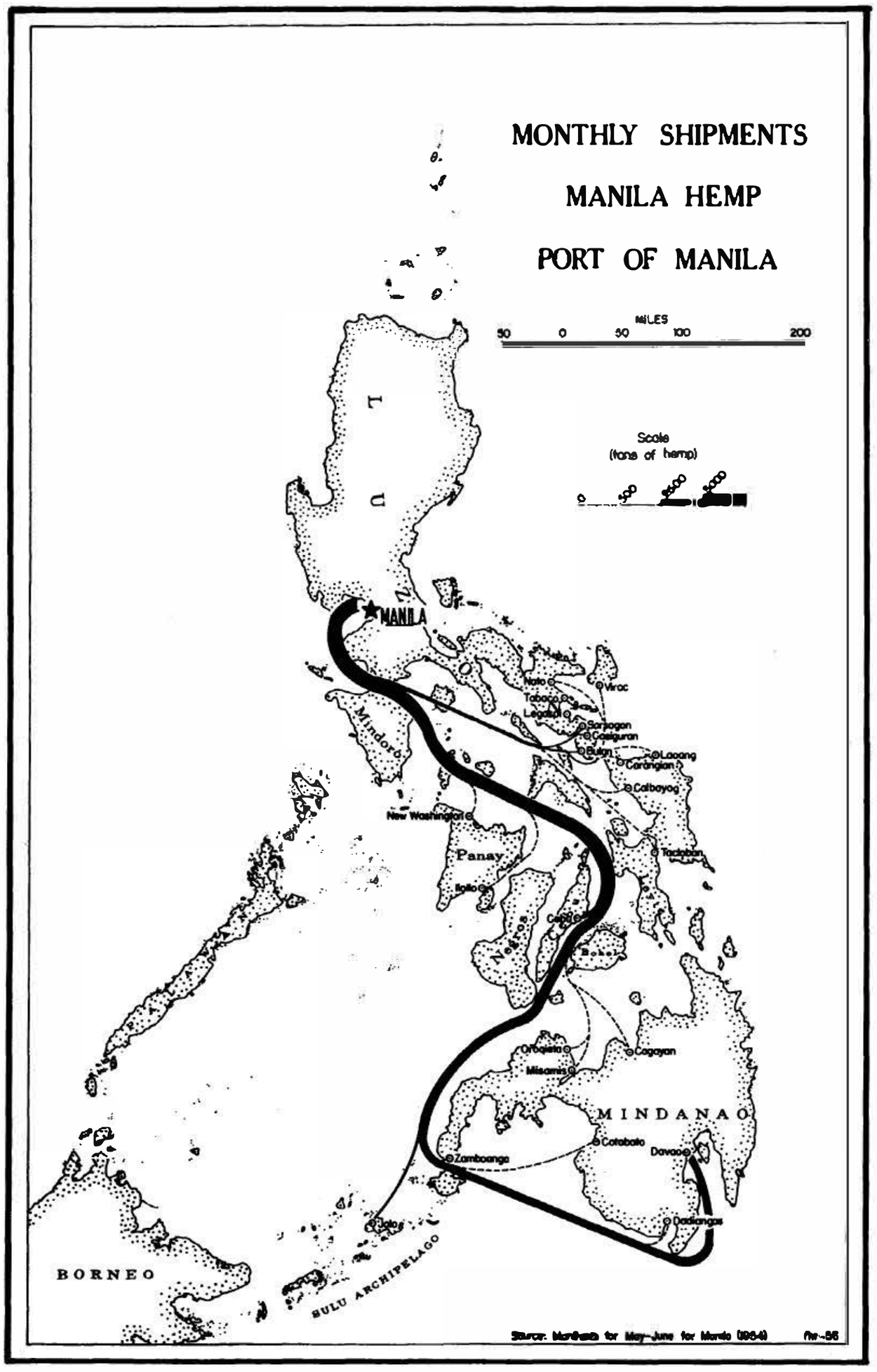
Although the immediate and contiguous hinterland of Manila produces no abaca, the port of Manila ranks first among Philippine ports in the export of hemp. Practically all (95 per cent) of the Manila hemp exported from Manila is brought to the port on vessels of the interisland fleet (see Map 20). The Davao area contributes the greater amount (43 per cent) with other ports on Mindanao and in the Sulu Archipelago contributing an additional 14 per cent.s Approximately 16 per cent of Manila's hemp comes from southeastern Luzon, and the remainder comes from the Visayan Islands, chiefly from the islands of Leyte and Samars

It is rather difficult to explain Manila's importance with regard to the collection and export of the hemp product which bears its names All producing areas lie at some distance from the port, and the hemp is a rather bulky commodity to transport. Historical primacy appears to offer the only reasonable justification since virtually no fabrication is performed in the Philippines prior to exports

Manila functions as an important collector of interislandsexport commodities, and, on the whole, the port has been able to maintain a position of dominance with respect to this function.s The margin of dominance by which the port of Manila controls this trade is ever lessening. As other ports of entry (and export) gradually strengthen their regional trade ties, it has been, and will continue to be, an accelerated growth of trade at the expense of Manila's position.

Passengers (Interisland):

Manila serves both as an important originator of and a terminator for interisland passenger traffic (see Map 21). Attracted by the glitter of the capital and chief metropolis and by the governmental, educational and commercial facilities available,



Map 20: Flow of Manila hemp (abaca, in tons) inbound to Manila during a 31-day period May 16-June 15, 1954.

Filipinos come to Manila in swarms. Approximately 175,000 passengers disembark at Manila annually, and, although there are no precise data to support this statement, probably an even larger number embark for destinations in the southern islands.[8]

The Visayan area originates the majority of Manila's terminal passenger traffic. Cebu and Iloilo both serve as important passenger origination points. Surprisingly, in view of the general subsistence nature of the economy of the eastern Visayans, the

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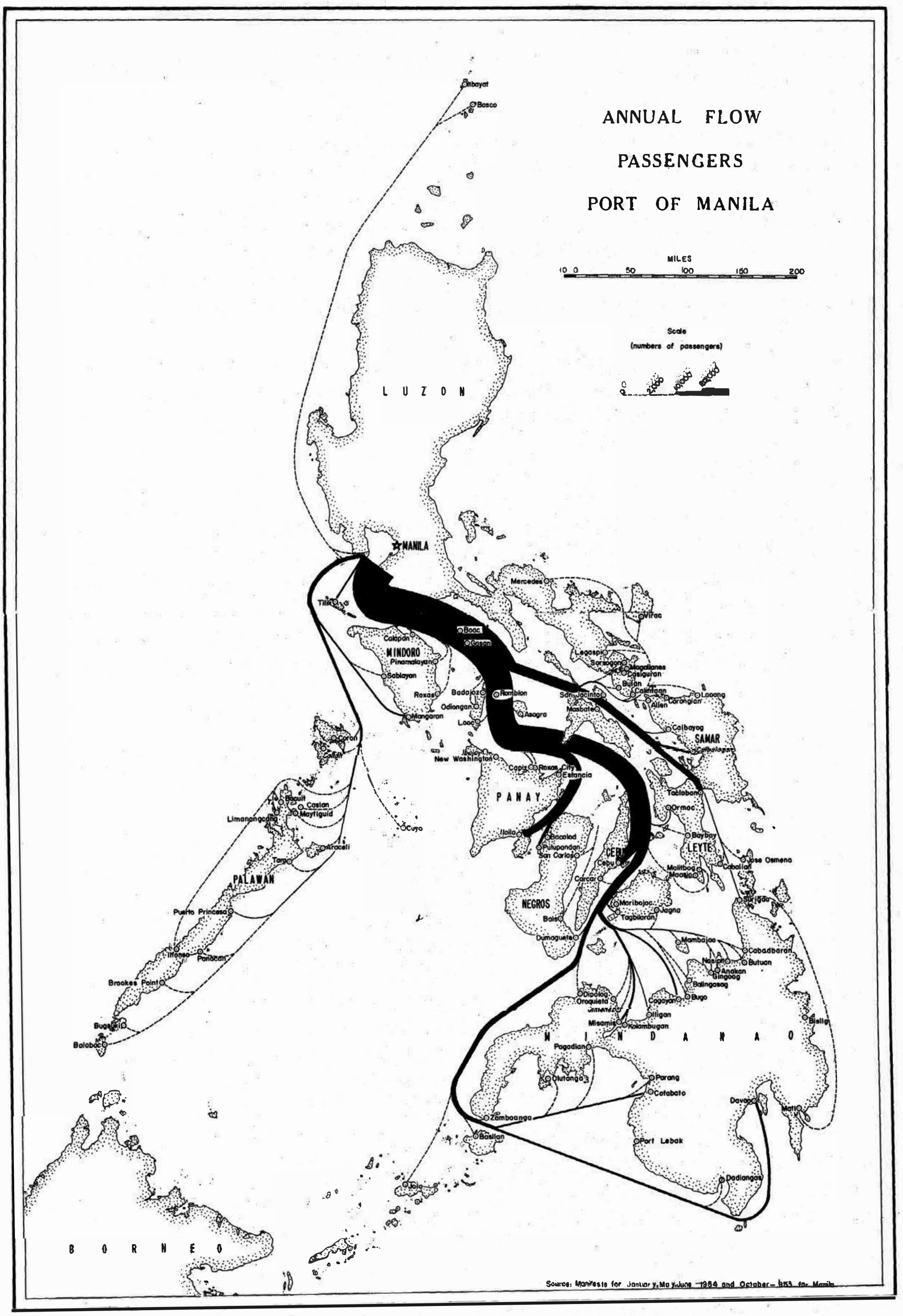
[8]For most southern ports influxes of passengers originating from Manila are substantially greater than passengers terminating in Manila from these same ports; viz., Cebu 30,000 vs. 36,000, Davao, 6,500 vs. 7,500.



Map 21: Flow of passengers inbound to Manila for the year, 1953-54.

islands of Samar and Leyte supply large numbers of passengers to Manila. It appears that these two islands are as much in the hinterland of Manila as they are in the hinterland of much nearer Cebu. The pull of Manila's greater financial opportunities attracts thousands of young people annually, particularly the young college graduate.

The island of Mindanao also supplies a considerable passenger flow to Manila. It is probable that a large portion of the Mindanao-originated passengers are social travelers rather than traveling for economic reasonsl. Small, but significant, numbers of passengers also arrive at Manila from ports on the islands of Palawan and Mindorol. Notable for their small numbers are the intra-island travelers. On Luzon overland buses, railroads and the Philippine Air Lines siphon off most of the potential waterl-borne passengers at fares competitive to water transport ratesl.

In brief Manila's large passenger traffic appears the result of its greater economic and professional opportunities and its function as the hometown for immigrants scattered throughout the Archipelago.

Foreign trade:

Manila is the major foreign trade port for the Philippines, and in this service it has developed into a major shipping crossroads for the Orient. Each year 1200-1400 overseas vessels, representing approximately 2,000,000 net registered tons of shipping, enter the port of Manila. Vessels of American registry are more numerous, followed by the flags of Norway, Great Britain, Sweden, Denmark, the Netherlands and others. Manila lands an overwhelming proportion of the Philippine imports,

Table XXIV: Selected Commodities Exported from the Manila Customs District, 1953-54.*

Commodity	Quantity (tons)	% Total Philippine export	Exporting points in district
Copra	139,1034	17.7%	Manila, Quinabigan, Castanas
Dessicated Coconut	32,626	73.8%	Manila
Copra meal and Cake	53,1568	71.2%	Manila
Coconut Oil (crude)	32,1736	49.7%	Manila
Centri-fugal sugar	181,1253	20.9%	Manila, Nasugbu
Molasses	15,1180	10.9%	Manila, Nasugbu
Tobacco	6,396	84.5%	Manila
Manila hemp	73,1825	75.7%	Manila
Logs	10,1488,739 bd.ft.	2.9%	San Teodorol, Manila
Lumber	7,127,158 bd.ft.		
Iron Ore	152,1780	11.4%	Marinduque
Manganese Ore	20,229	76.11%	Busuanga

*Source: Offshore manifests filed at each Customs Office, 1953-54.

perhaps 85% or more,[9] and loads large quantities of export commodities (see Table XXIV). Regular overseas connections link Manila to European, United States and Asian ports at frequentlintervals.

Summary:

Manila is the premier port of the Philippines.l The port has been able to attainl and retain this dominant position largely through the presence of an excellent physical harbor and through the port's historical primacy. In spite of rather good overland communications to a productive hinterland on the island of Luzon, Manila alsolserves an important interisland hinterland by water transport. From its interisland and, to a lesser degree, intra-island trade areas come large quantities of foodstuffs to supplement Manila's inadequate local food supplies. Manila also collects large amounts of exportable commodities which are transhipped at Manila to overseas vessels. Virtually all Philippine imports pass through Manila for archipelago distribution by the interisland shipping fleet.l

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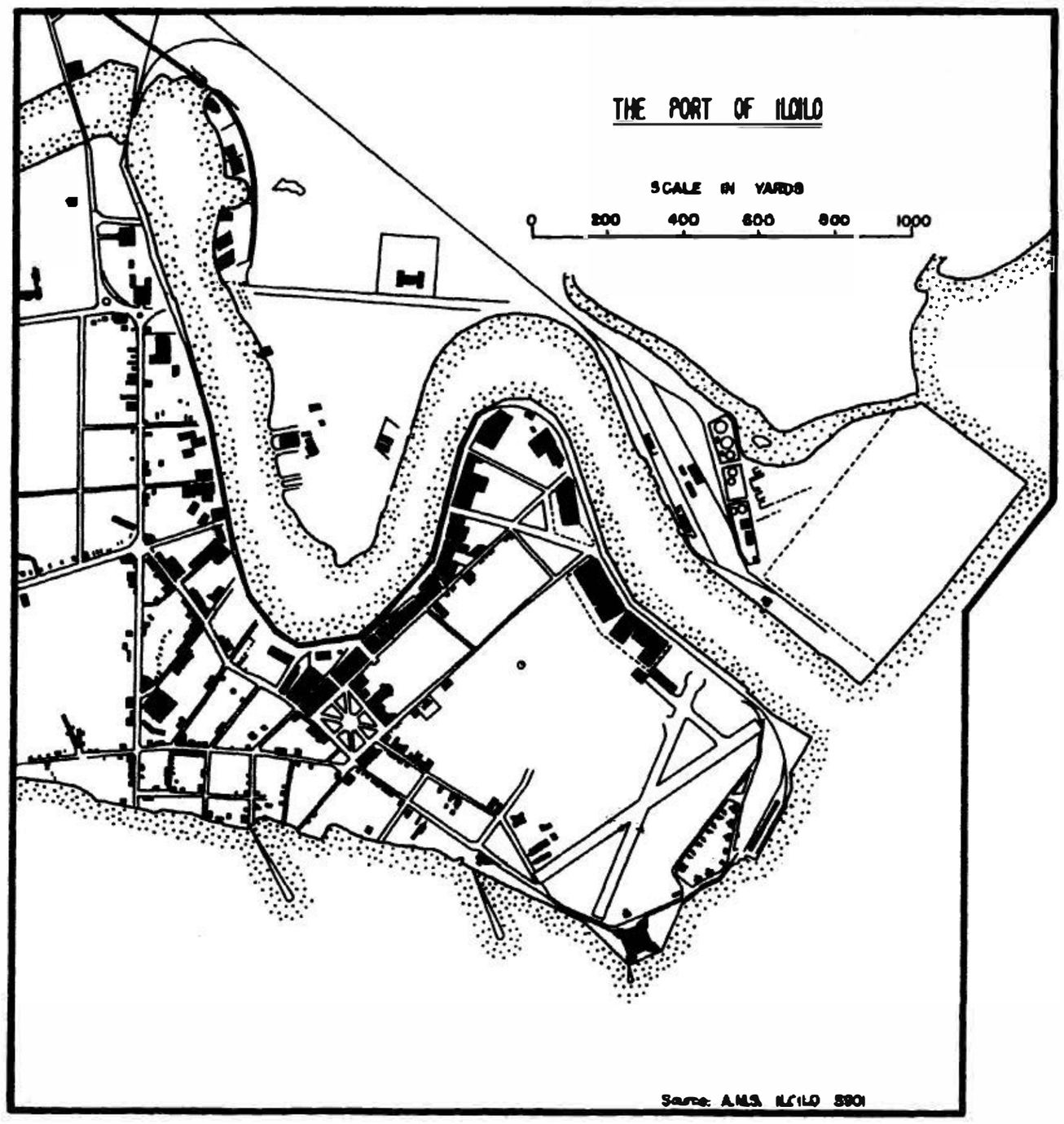
[9]United States Department of Commerce, Investment in the Philippines -- Conditions and Outlook for U. S. Investors, Washington: Government Printing Office, 1955e p. 47.

The Port of Iloilo:

Today the port of Iloilo continues to serve as a major port-of-call for both Philippine interisland and overseas vessels. However, the relative importance that the port once held with regard to Philippine commerce has declined, and Iloilo now ranks considerably behind Manila and Cebu in port operations. The rise of Iloilo's port was largely the result of agricultural developments on nearby, sugar-rich Negros Island. Iloilo functioned basically as entrepot for the sugar industry on Negros, transhipping the cargoes brought from Negros by "lorchas" and other light-erage equipment to overseas ships for export. Supply for Negros flowed by way of Iloilo too. With the inevitable development and improvement of port and harbor facilities on Negros, e.g., at Pulupandan, Hinigaran and Santo Nino, not only did the bulk of the sugar bypass Iloilo enroute overseas, but much of resupply trade was handled directly as well.



Map 22: Site and installations of the Port of Iloilo.

Today the port of Iloilo functions basically for its immediate hinterland on Panay, i.e., Iloilo Province, and to a lesser degree as the entrepot for western Negros. It also serves as a Philippine port of entry for an extensive Customs district, a factor which has led, at least in part, to the presence of large numbers of overseas vessels calling to secure permission for outport loadings (452 overseas vessels in 1953-54 fiscal year).

Site and Port Facilities:

Iloilo Strait, the body of water lying between Guimaras Island and the shores of eastern Panay, provides the harbor for the city of Iloilo. Entrance to this harbor, and consequently to the port of Iloilo, can be secured from either approachlto the Straitl. Protection for the harbor is provided by Guimaras Island to the east and Panay Island to the west.l

The port of Iloilo is comprised of two separate sets of facilitiesl. Overseas vessels have wharfage at the Iloilo Strait Wharf, a berth 525 feet long with depths alongside of 25-35 feet (see Map 22). Interisland facilities are provided for by marginal wharfage along the southern bank of the shallow Iloilo River. Shoaling in the river causes a variation in depths alongside interisland wharfage; the depths at the various berths range from 3-16 feet (see Figure 11). Both port areas are served by tracks of the Philippine Railroad alongside the wharves.[1]

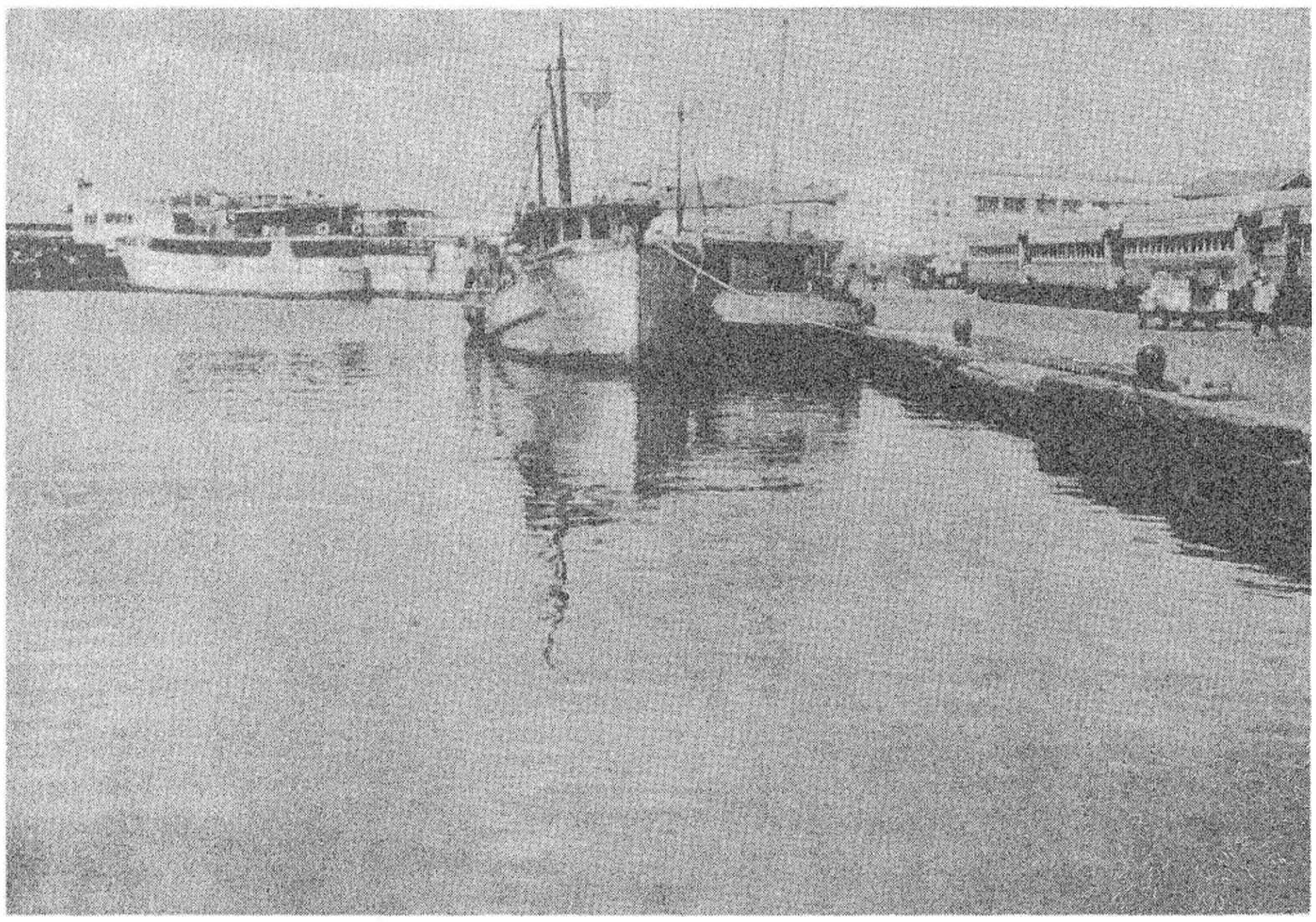


Figure 11: Interisland shipping moored along marginal wharfage in the Iloilo River at Iloilo. Note thel paralleling rail facilities. The two larger ships (upper left) are used mainly for passenger service to Negros. The ships in the foreground are fishing vessels.

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[1]See Philippine Coast Pilot, I,l op. cit., pp. 375-86.

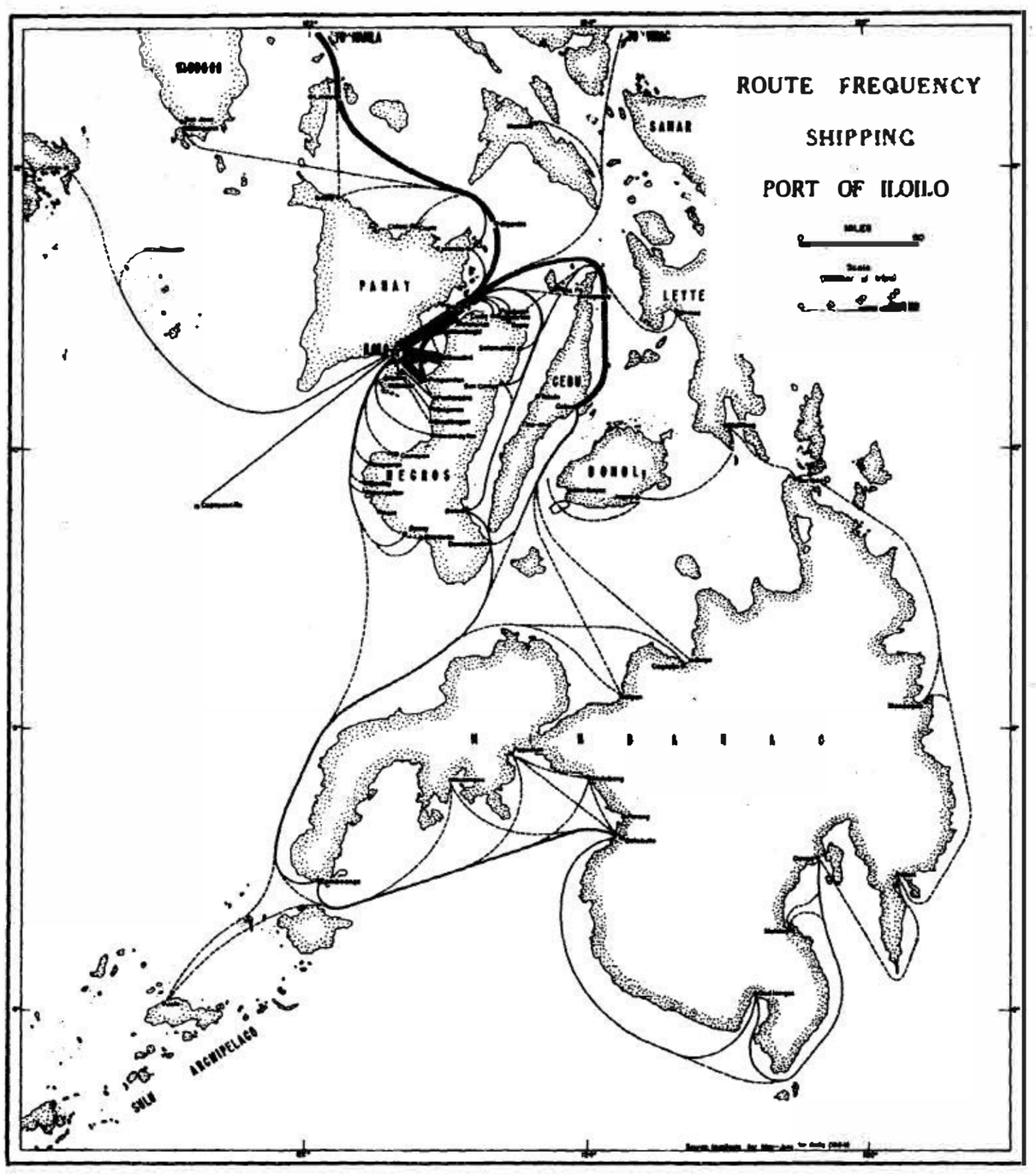
Frequency of Connection:

Iloilo port receives a total of approximately 500 entering interisland vessels monthly, representing an average of 140,1000 gross registered tons of shipping. However, the total number of entrances (and aggregate gross tonnages) creates a deceptive evaluation of Iloilo's interisland commerce. Fishing vessels and ferries arriving daily from nearby Negros, the latter primarily passenger-loaded, comprise a large portion of Iloilo's ship traffic (see Table XXV).

Table XXV: Monthly Frequency of Entrances to Iloilo by Region of Origin, May 15 - June 15, 1954.*

Region of Origin	Frequency (Percentage of total entrances)
Manila and Northern Visayans	11
Cebu and Mindanao	11
Eastern Visayans	0
Negros	55
Panay	1
Fishing Vessels	22

*Source: Coastal Manifests at Iloilo, May-June, 1954.



Map 23: Routes and frequency of interisland shipping inbound to Iloilo during a 31-day period May 16-June 15, 1954.

At least daily service is provided to Manila and to Cebu. Less frequent service is maintained with Mindanao. Two commuting vessels maintain regularly scheduled service to Bacolod and Pulupandan on Negros, each vessel making two trips daily across the narrow Guimaras Strait (see Map 23).

Food Commodities (Interisland):

Iloilo is not an important terminal for interisland shipments of food commodities. Quite the contrary, the port is a significant originator of interisland food cargoes. The immediate and contiguous hinterland inIIloilo Province is a productive agricultural region and is reasonably well-served by overland transportation.

From time to time small shipments of rice and corn are brought to Iloilo by interisland carriers. Inbound corn shipments total only 3,000-4,000 tons annually, originating solely from the port of Cotabato in southern Mindanaol Inbound rice, coming from ports on southern Negros, total less than 1,000 tons annually.

Iloilo supplies large quantities of both rice and corn to the archipelago, particularly to Manila and Cebu. Manila receives approximately 5,000 tons of rice and 1,000 tons of corn annually from Iloilo; Cebu receives 6,000 and 3,000 tons, respectively.

An active commercial fishing fleet is based at Iloilo, and it adequately supplies the city with fish taken from the waters of Guimaras Strait and from those off northern Negros and Panay. These small ships, many of them equipped with sail only, land an aggregate of four to five tons of fish daily at Iloilo. Most of the fish is consumed in the city of Iloilo whose 1948 population totaled 110,122,[2] with the remainder being transported by bus and truck to the inland cities of the province of Iloilo (1948 population, 816,382).[3]

With respect to interisland food commodities the port of Iloilo functions more importantly as an originator rather than a terminator of cargoes.

Export Commodities:

The trade patterns of Iloilo's inbound export commodities more closely parallel the trade patterns of Manila than those of the other important interisland ports. Inbound copra shipments to Iloilo, principally from southern Negros, are negligible; inbound abaca shipments are non-existent. Iloilo serves primarily as the collection center for sugar and molasses, and to a lesser degree for timber products.

Sugar and molasses, as well as timber, come largely from the island of Negros. Inbound interisland sugar shipments to Iloilo are quite seasonal. The sugarcane

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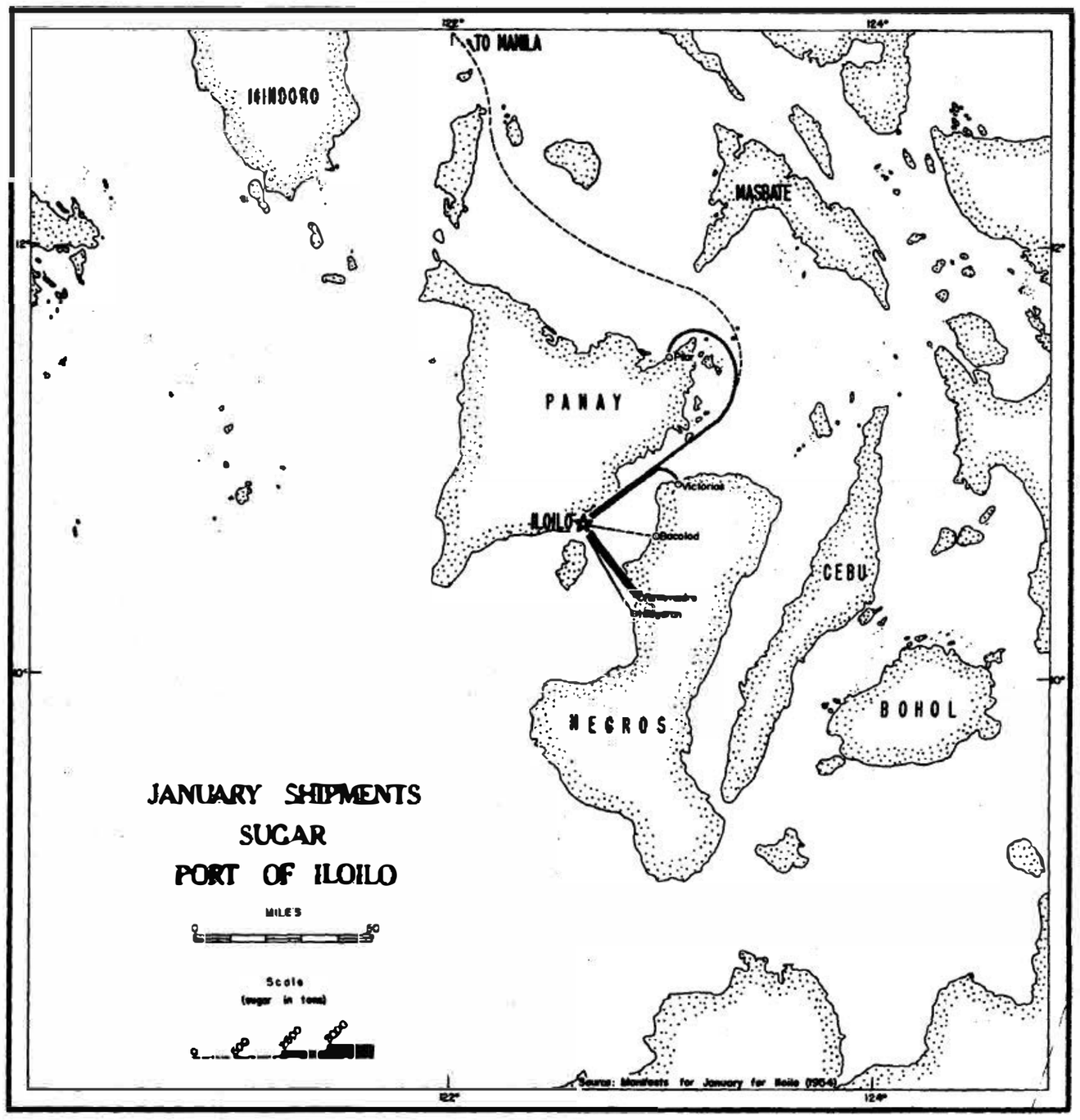
[2]Republic of the Philippines, Bureau of Census and Statistics, 1948 Census of the Philippines: Population Classified by Province, by City, Municipality, and Municipal District, and by Barrio, Manila: Bureau of Printing, 1951. p. 112.

[3]Census, op. cit. p. 107.

milling season in western Negros lasts for only six months, at the most, excepting northern Negros where the milling season is extended to ten monthsl. January, which represents a month during the main harvesting season for western Negros, brings approximately 5,000 tons of sugar to Iloilo (see Map 24). October, a month preceding the main harvest period, sees only 400 tons landed, this almost entirely from northern Negros. Molasses, on the other hand, is shipped in regular quantities of approximately 7,500-8,000 tons monthly. Small amounts of sugar also arrive at Iloilo from northern Panay.

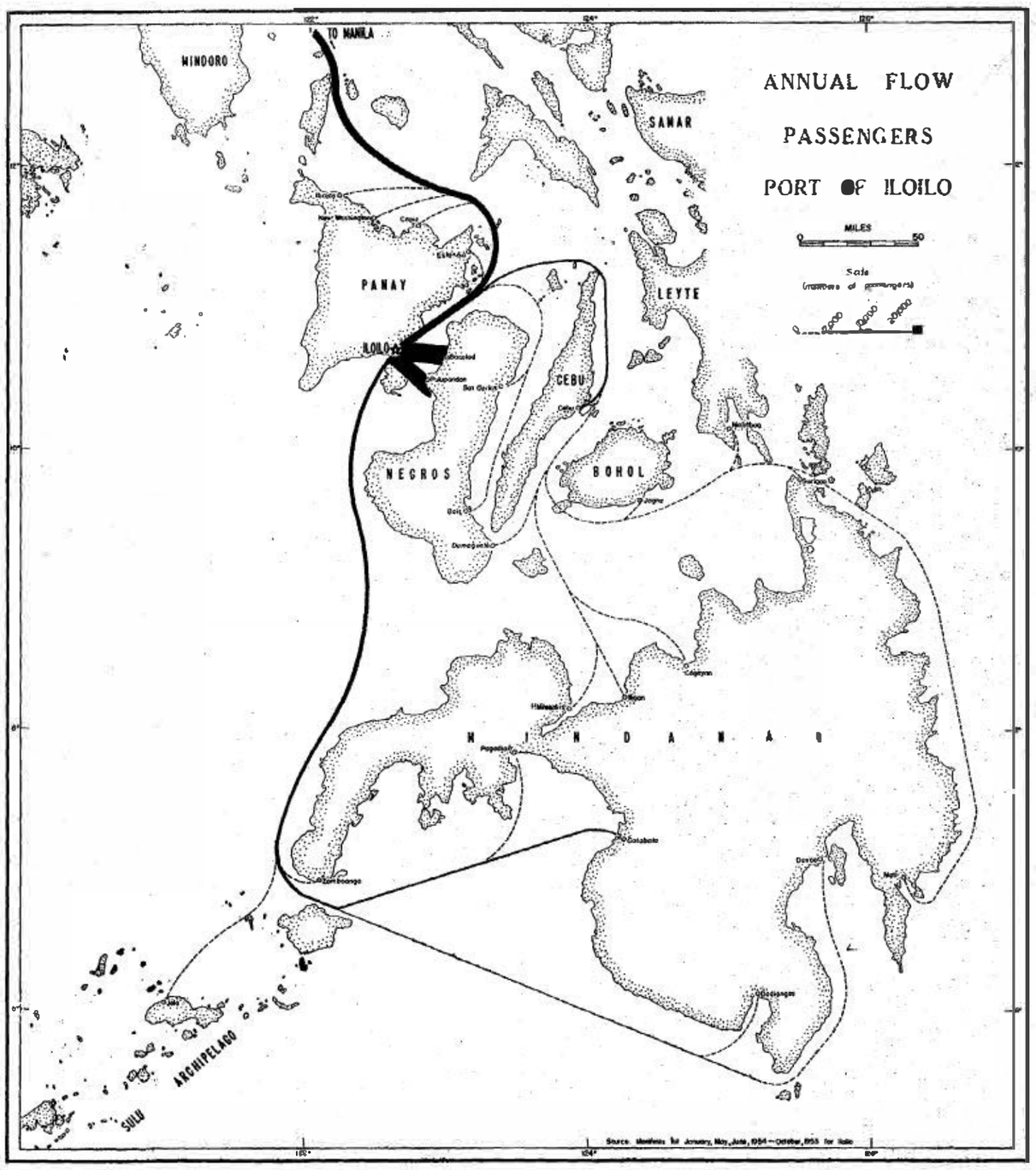


Map 24: Flow of sugar (in tons) inbound to Iloilo during a 31-day period May 16-June 15, 1954.

Iloilo receives approximately 1,000,1000 board feet of logs and lumber monthly from ports in extreme northern and southern Negros. That the bulk of this timber is intended for local consumption is evidenced by the small export of lumber from the port of Iloilo (see Table XXVII).

Passengers:

The passenger traffic of Iloilo is numerically large with an annual flow of approximately 130,000 persons inbound to the port and a similar number outbound. Commuting traffic with Negros Island is particularly significant, accounting for 77 per cent of Iloilo's total passenger traffic (see Table XXVI and Map 25). Through the port of Iloilo flow most of the seasonal or migratory workers for the sugarcane plantations and mills on Negros. Iloilo is not an important passenger terminal or origination



Map 25: Flow of passengers inbound to Iloilo for the year 1953-54.

for vessels of the Philippine interisland core fleet. The intransit passenger flow is very largee

Passenger movements in and out of Iloilo are quite regular throughout the year, with numbers of passengers slightly greater during the period from January to Junee

Table XXVI: Annual Inbound Passenger Traffic of Iloilo from Selected Ports, 1953-1954.*

Origin	Per Cent of Total Inbound Passengers
Bacolod	50.0
Pulupandan	27.7
Manila	12.5
Cebu	2.8
Zamboanga	0.8
Cotabato	3.4
Total for six ports	97.2

*Source: Coastal Manifests at Iloilo, 1953-54.

Foreign Trade:

Iloilo functions basically as a sugar export port, and in performing this function it is surpassed only by the port of Manila (see Tables XXVII and XXVIII). Since the bulk of Philippine sugar is intended for United States markets, a great many U. S. ships call at Iloilo. Even larger quantities of sugar are exported directly from production sites within Iloilo's Customs district. Iloilo and its Customs district also export large amounts of the sugar by-product, molasses.

In addition to sugarcane products the port of Iloilo exports small quantites of copra, lumber and manganese ore, the latter brought to it from mines on Busuanga Island, north of Palawane

Foreign Commerce:

Table XXVII:e Exports from Iloilo, by Destination, 1953-54 (in metric tons, except timber).e*

Destination	Sugar	Copra	Copra Cake	Molasses	Manganese Ore	Timber (bd.ft.)
United States	59,700	11,243	309	--	--	2,377,094
Japan	1,270	--	--	57,833	1,737	--
Canada	285	305	--	--	--	--
Europe	--	6,198	--	--	--	--
Venezuela	--	258	--	--	--	--
Taiwan	--	--	--	--	--	48,344
South Africa	--	--	--	--	--	725,442
Korea	--	--	--	20,981	--	--
Hongkong	--	--	--	8,864	--	--
Siam	--	--	--	1,333	--	--
Total	61,255	18,004	309	89,011	1,737	3,150,870

Table XXVIII: Exports from the Iloilo Customs District, by Destination, 1953-54 (in metric tons, except timber).*

Destination	Sugar	Copra	Copra Cake	Molasses	Manganese Ore	Timber (bd.ft.)
United States	170,666	11,801	309	3,036	--	11,684,797
Japan	1,270	--	--	85,182	1,737	7,799,486
Canada	285	305	--	--	--	--
Europe	--	6,198	--	--	--	--
Venezuela	--	258	--	--	--	--
Taiwan	--	--	--	--	--	48,334
South Africa	--	--	--	--	--	5,479,269
Korea	--	--	--	23,314	--	--
Hongkong	--	--	--	8,864	--	--
Siam	--	--	--	1,333	--	--
Total	172,221	18,562	309	121,729	1,737	25,011,886

*Source: Outgoing Manifests at Iloilo, 1953-54.

Table XXIX: Nationalities and Numbers of Vessels Calling at the Iloilo Customs District, 1953-54.*

Nationality	Total Vessels	Copra Loaded	Timber Loaded	Sugar Loaded
United States	94	14	7	36
Japanese	132	--	15	94
Norwegian	79	3	2	21
Danish	43	5	25	9
Dutch	39	4	12	5
Swedish	11	1	--	4
British	27	2	1	6
Italian	2	--	--	--
Chinese	5	--	--	--
Panamanian	4	--	--	--
Filipino	11	--	1	6
German	2	1	--	--
French	2	1	--	--
Honduran	1	--	--	--
Total	452	31	63	187

*Source: Outgoing Manifests at Iloilo, 1953-54.

Summary:

The port of Iloilo is an important interisland and international port-of-call although its relative importance is on the decline in favor of other Philippine ports. Iloilo maintains frequent service for passengers and freight with its most important hinterland on western Negros; however, as port facilities have developed in Negros, much of the traffic has bypassed Iloilo.

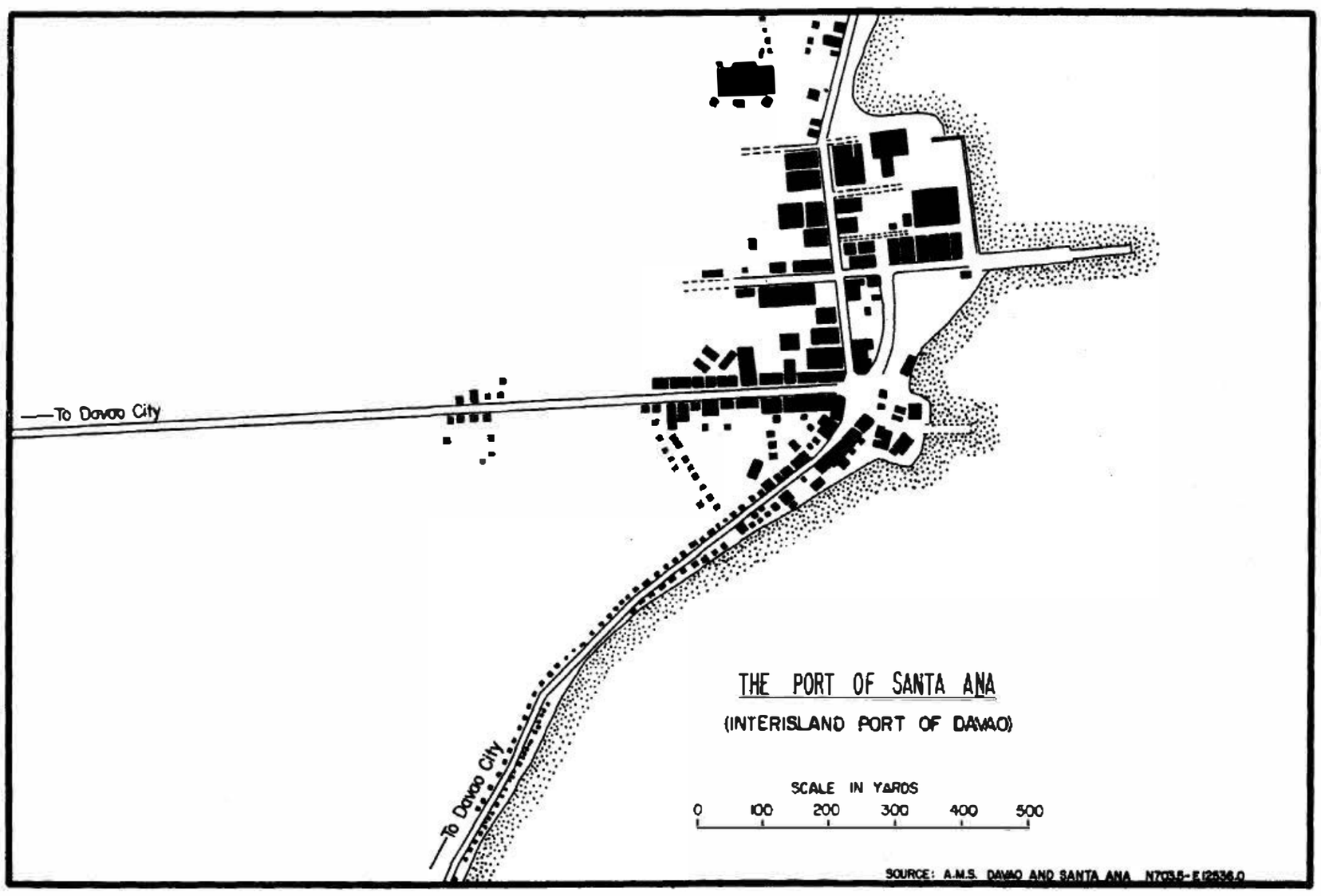
Corn from Cotabato, rice from southern Negros and fish from Visayan waters supplement Iloilo's food supplies. Important interisland rice and corn cargoes originate at Iloilo. Sugar and molasses from western Negros are transhipped at Iloilo to overseas cargo vessels in large quantities.

Iloilo is the administrative (and commercial) center for the sugar-rich Iloilo Customs District, a district which embraces the provinces of Iloilo, Capiz, Antique, Romblon and Occidental Negros.

The Port of Davao:t

The port of Davao is located in the southeastern corner of the island of Mindanao on one of the inner reaches of commodious Davao Gulf. The port constitutes one of the more important trade foci centers in Philippine domestic commercet. Owing to the presence of a more restricted hinterland than those that surround the trade centers of Cebu, Manila and Iloilo, areally, and to a peripheral archipelago location, the port of Davao has not developed the important stature that is associated with these sister interisland ports. The trade area of Davao is confined to southern and eastern Mindanao, an extremely productive, though lightly settled, region which lies too remote to be effectively served by the other major interisland foci ports.

The development of the city and port of Davao into an important regional trade center for southeastern Mindanao has been gradual although the transition has been greatly accelerated in the immediate prewar and postwar era (World War II). There can be little argument that the city of Davao, and its metropolitan environs, is expanding, areally and demographically, at a rate at least as great or in excess of all other major Philippine urban concentrationst. It is probable that at the present writing (1956) Davao ranks third only to Manila and Cebu in total population (see Table XXX). The chief deterrent to parallel port growth lies not in the lack of cargoes, both of an incoming and outgoing nature, but rather in the limiting role defined by its peripheral location, a location well-removed, spatially, from the main routes of Philippine interisland shipping and trade. Davao is in every sense a terminal, the end of a seven hundred and fifty mile voyage from Manila (see Map 26).



Map 26: The interisland port of Davaot.

Table XXX: Population of Major Philippine Cities, 1903-1956.*

City	1903	1918	1939	1948	1956 (est.)
Manila	219,928	285,306	623,362	983,906	1,450,000 (metro.)
Cebu	31,079	65,602	142,912	167,503	194,000
Davao	8,560	13,300	95,444	111,263	128,000
Iloilo	19,054	48,114	88,203	110,122	127,000
Zamboanga	3,281	30,798	(131,729)	103,317	120,000

*Source: Various Censuses of the Philippines.

Historical Development:

Those factors which have been instrumental in Davao's development into a major interisland port are largely geographical in nature. Although the city was rather early considered a part of the "conquered" Spanish Philippines, it remained for a long time a sleepy, unimportant provincial capital and Spanish garrison town. The inability of Spain to conquer southern Mindanao robbed Davao of a large part of its potential hinterland. This apparent foreordained destiny to obscurity was interrupted by a mass ingress of Japanese agricultural colonists early in the Twentieth Century, immigrations of sufficient proportions to earn Davao the nickname of "Little Fukuoku."[1] These energetic Japanese colonists turned generally to the commercial production of the abaca plant (Musa textilis), an indigenous, banana-like plant from which the valuable Manila hemp is extracted. Somewhat later, Filipinos from the more crowded areas to the north began large scale emigrations to Davao to provide labor for the abaca plantations and also to cultivate the largely unoccupied, but fertile, agricultural lands of southeastern Mindanao. Owing to the presence of extensive areas of good agricultural lands, edaphically and climatically, the southeastern corner of the archipelago became an important producer of Manila hemp, qualitatively and quantitatively, and the largest single source of surplus corn (maize) in the Archipelago.

Major elements of the interisland shipping fleet, attracted by the important cargoes of outgoing abaca and corn, the increasingly large inbound cargoes and the significantly large passenger influxes, mainly of immigrating laborers, began to schedule major operations through the port of Davao. Those companies whose ships most frequently called at Davao, because of the long distances from both Manila and Cebu, established branch offices in Davao. With the selection of Davao as a major port-of-call the smaller ports scattered along Mindanao's southern and eastern coasts from Cotabato almost to Surigao (see Map 27) funneled their trade through this nascent

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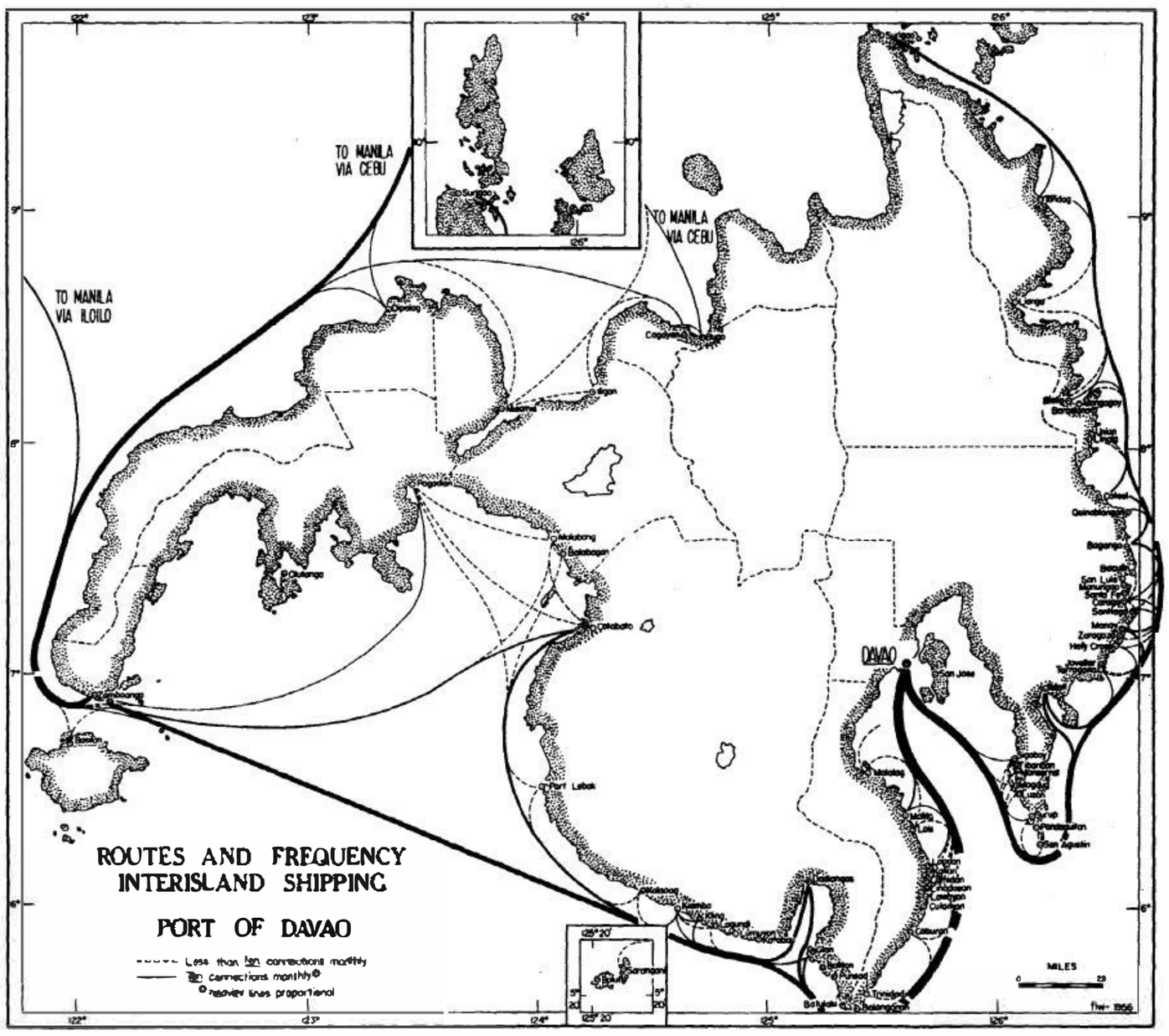
[1] Many Japanese entered the Philippines to supply laborers on road construction. After the conclusion of contracts many of these workers settled in Davao. The total number of Japanese colonists in Davao at the zenith (1939) probably numbered close to 15,000 Japanese. A. Kolb, Die Philippinen, Leipzig, Kohler: 1941. pp. 233-34.

port. Thus Davao assumed the functions of an entrepot for a trade area embracing approximately one-half of the island of Mindanao, a region which today includes over fifty lesser ports scattered along the coasts of the provinces of Davao, Cotabato and Surigaol

Into the harbor and port of Davao enter some 125 vessels monthly bringing important quantities of goods of manufacture from the "outside world" or furnishing connection to the hinterland. Generally these inbound cargoes consist of commodities of foreign manufacture transhipped through the Philippine ports of Manila and Cebu, modest quantities of copra and abaca from the smaller ports within Davao's hinterland and large numbers of newly arriving or returning passengersl In addition to the interisland ships a number of foreign vessels call at the nearby port at Sasa, the deep water overseas port for Davaol These foreign vessels enter to load for export. Davao is a Customs-staffed port of entry.

Frequency of Shipping:

Vessels intending to call at the port of Davao from the populous areas to the north, i.e., the Visayan Islands and the island of Luzon, normally first pass by way of the important interisland trade foci ports of Cebu or Iloilo enroutel From these intermediate ports access to Davao can be gained by two means: either by skirting the island of Mindanao to the west, and passing by way of the port of Zamboanga and thence along the southern shores of Mindanao, or by following a route parallel to the island's eastern littorall Map 29 attests to the greater frequency of use of the western



Map 27: Routes and frequency of interisland shipping inbound to Davao during a 31-day period May 16-June 15, 1954.

option, clearly reflecting the current greater productivity of western and southern Mindanaos This assumption seems particularly valid when the western route is viewed in light of its longer distance from Cebu.s Eastern Mindanao, until very recent years, was only lightly occupied by man, offering small inducementssto attract interisland ship operators. The unbalance of the eastern versus western littorals is being altered rapidly with greatly increased settlement in the coastal regions of Surigao and eastern Davao provinces. It is conceivable that the day is not too distant when eastern Mindanao traffic will equal that of the westernsand southern coasts (see Table XXXI). The new Davao-Agusan highway, paralleling the eastern coast, inland, should accelerate occupances The one important factor which will serve to maintain

Table XXXI: Growth in Population, Numbers of Farms and Cultivated Areas (hectares) for Selected Provinces, 1903-1948 (thousands omitted).*

Province	Year	Population	Nos. Farms	Cultivated Land
Cotabato	1903	125.9	.03	.3
	1918	172.0	1.7	4.3
	1939	298.9	25.0	76.7
	1948	439.7	51.5	172.7
Davao	1903	65.5	1.3	3.8
	1918	108.2	6.6	34.1
	1939	292.6	26.3	51.4
	1948	364.9	35.4	132.5
Surigao	1903	115.1	7.4	24.3
	1918	122.2	23.3	44.7
	1939	225.9	29.0	80.0
	1948	265.0	31.3	83.4
Philippines	1903	7,635.4	815.5	1,298.8
	1918	10,314.3	1,955.3	2,415.8
	1939	16,000.3	1,634.7	3,955.4
	1948	19,234.2	1,638.6	3,711.9

*Sources: Census of the Philippines.

traffic along the western route is the gradual settlement of new agricultural lands in the pioneer areas of the Korondal and Cotabato Valleys of Cotabato Provinces

The greater number and tonnage of vessels entering the port of Davao are members of the Philippine interisland core shipping fleet. Of the approximately 125 vessels of all classes entering Davao monthly, representing 84,000 gross registered tons of shipping, some 56 per cent (79,000 gross tons of a total of 84,000 gross tons) are members of the Philippine interisland core fleet. The core fleet vessels aggregates 94 per cent of the total registered tonnage of entering vessels. The core fleet vessels

operate so as to provide the port of Davao with its connections to other Philippine interisland trade centers. These vessels are not instrumental in the transportation of cargoes from Davao's hinterland to the port. A relatively small number of locally owned vessels, probably numbering no more than a dozen ships of smaller size, move the bulk of the cargoes necessary for Davao to perform its port collective function. The larger bulk carried by these smaller vessels is made possible by their more frequent local service.

Davao maintains connections with the ports lying within its hinterland with at least weekly service, often much more frequently. Several representatives of the core fleet arrive daily at Davao from Manila and ports in the Visayan Islands.

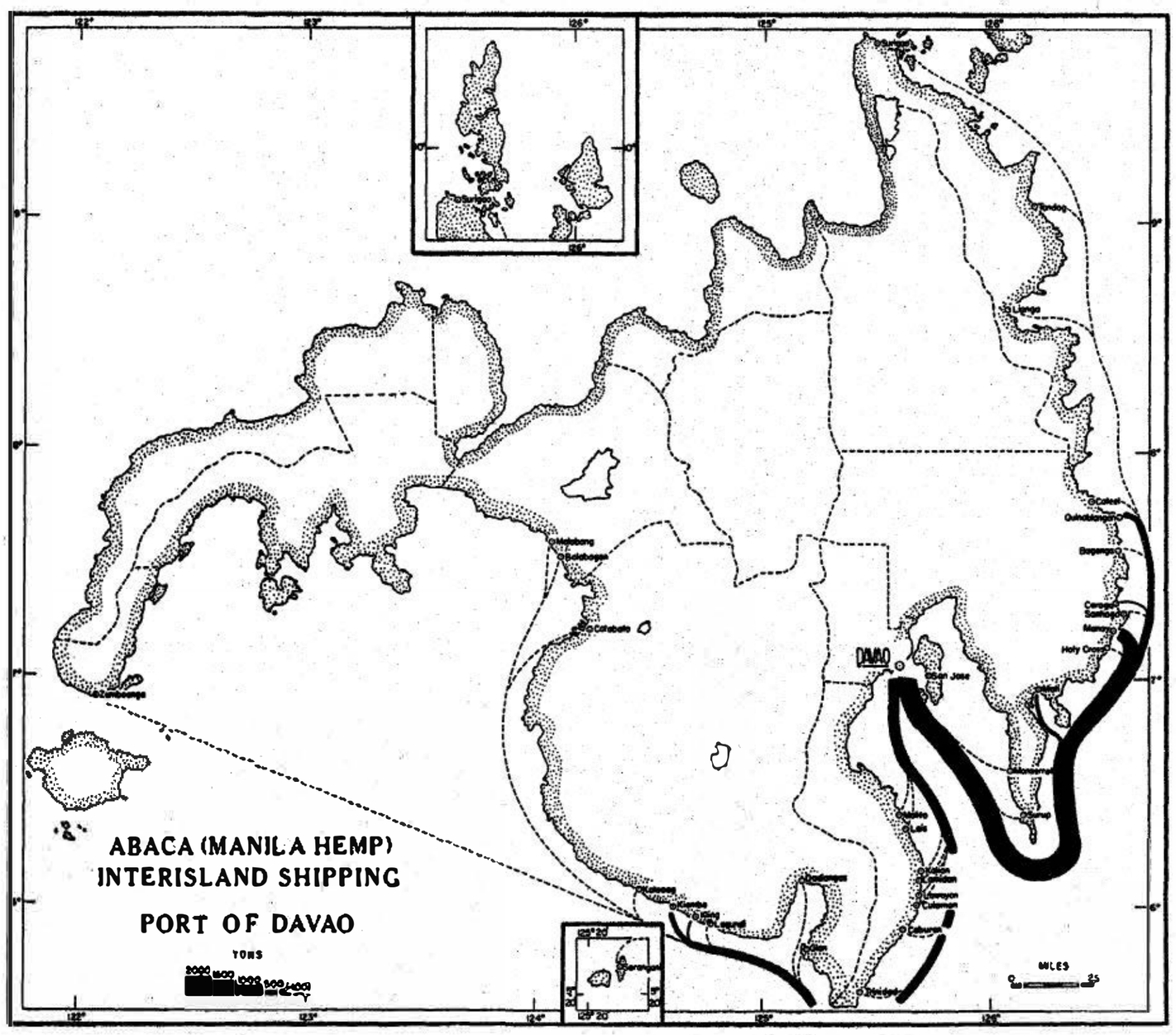
Food Commodities (Interisland Trade):

The Davao area, referring to the larger region directly inland behind the port, is virtually self-sufficient in the basic food staples. Only relatively insignificant quantities of corn, rice and livestock arrive by interisland transport for consumption at Davao. Annual inbound movements of corn and rice total no more than 300 tons and 6,000 tons, respectively; and most of this arrives while the fields of Davao are being planted and are, hence, momentarily unproductive. The food commodities inbound to Davao in truly significant quantities are the processed and canned goods, generally of foreign origins, transhipped from foreign carriers at Manila or Cebu, and brought to Davao by the core fleet.1 Conversely the port of Davao, and the hinterland immediately contiguous to it, are important originators of food commodity cargoes with which deficit regions in other parts of the Archipelago are supplied. These outbound food cargoes consist principally of corn grains and, to a lesser extent, rice. The island of Cebu with its inadequate agricultural base is the most important customer for Davao-produced corn1 A reasonably regular flow approximating 41,1500 tons of corn grains annually comes from Davao on interisland carriers to Cebu. Surpluses of rice, in small although constant quantities approximating 11,500 tons annually, are shipped to the important deficit region of Cebu. Davao also sends corn and rice to Manila, 1600 tons and 2800 tons annually, respectively.

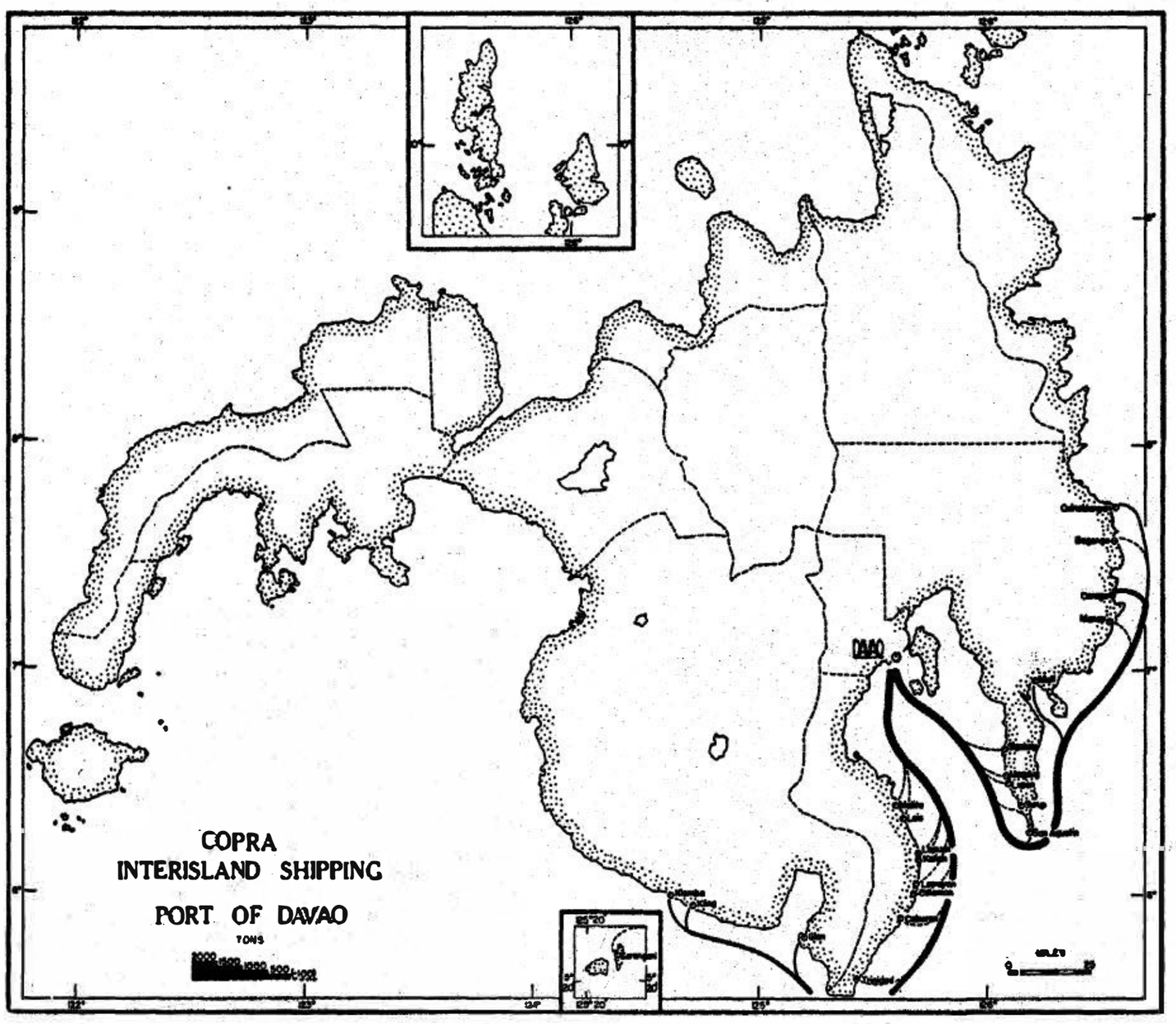
Export Commodities (Interisland):

Copra and abaca (Manila hemp) are the two significant commodities, quantitatively, of an export nature which focus on, and move to, the port of Davao from the port hinterland. Neither is represented in large amounts although both contribute toward swelling the bulk of Davao's trade. Both copra and abaca are bulky commodities and ill-bear heavy transportation costs; hence, collection points for these two crops are quite localized. These two commodities tend to move toward the nearest port of foreign access1 The hinterlands of copra and abaca for Davao lie at no great distance from the port.

The abaca hinterland for Davao embraces a larger area than that for copra. Davao has attained its important stature with respect to abaca collection largely through the high quality and large quantities of abaca produced in its immediate contiguous hinterland. Since foreign shipping was already attracted to Davao, this, in turn, has enhanced the desirability of concentrating export abaca at Davao for a wide area.1 Small amounts of abaca are collected along the entire southern coast of Mindan-



Map 28: Flow of Manila hemp (abaca, in tons) inbound to Davao during a 31-day period May 16-June 15, 1954.



Map 29: Flow of copra (in tons) inbound to Davao during a 31-day period May 16-June 15, 1954.

ao eastward to Zamboanga and along the entire eastern coast southward from Surigaoe However, considerably more than one-half of Davao's 2,700 tons of monthly inbound abaca originates from those ports located at the extreme southern end of the east coast (see Map 28). The concentration of abaca production in this extreme southeastern cornereof the island appears to have resulted from the greater adaptability of this area, physically, to produce the abaca plante

The copra trade of the port of Davao, on the other hand, is confined to those south and east coast ports which lie within a radius of one hundred miles from Davaoe The southwestern Mindanao regional trade center of Zamboanga has actively and successfully competed for the copra supplies from the southern shores of Mindanaoe Surigao competes for the copra supplies produced along the eastern coast, though not as successfully as Zamboanga. Davao's 1,300 tons of copra monthly come about equally from south and east coast ports (see Map 29).

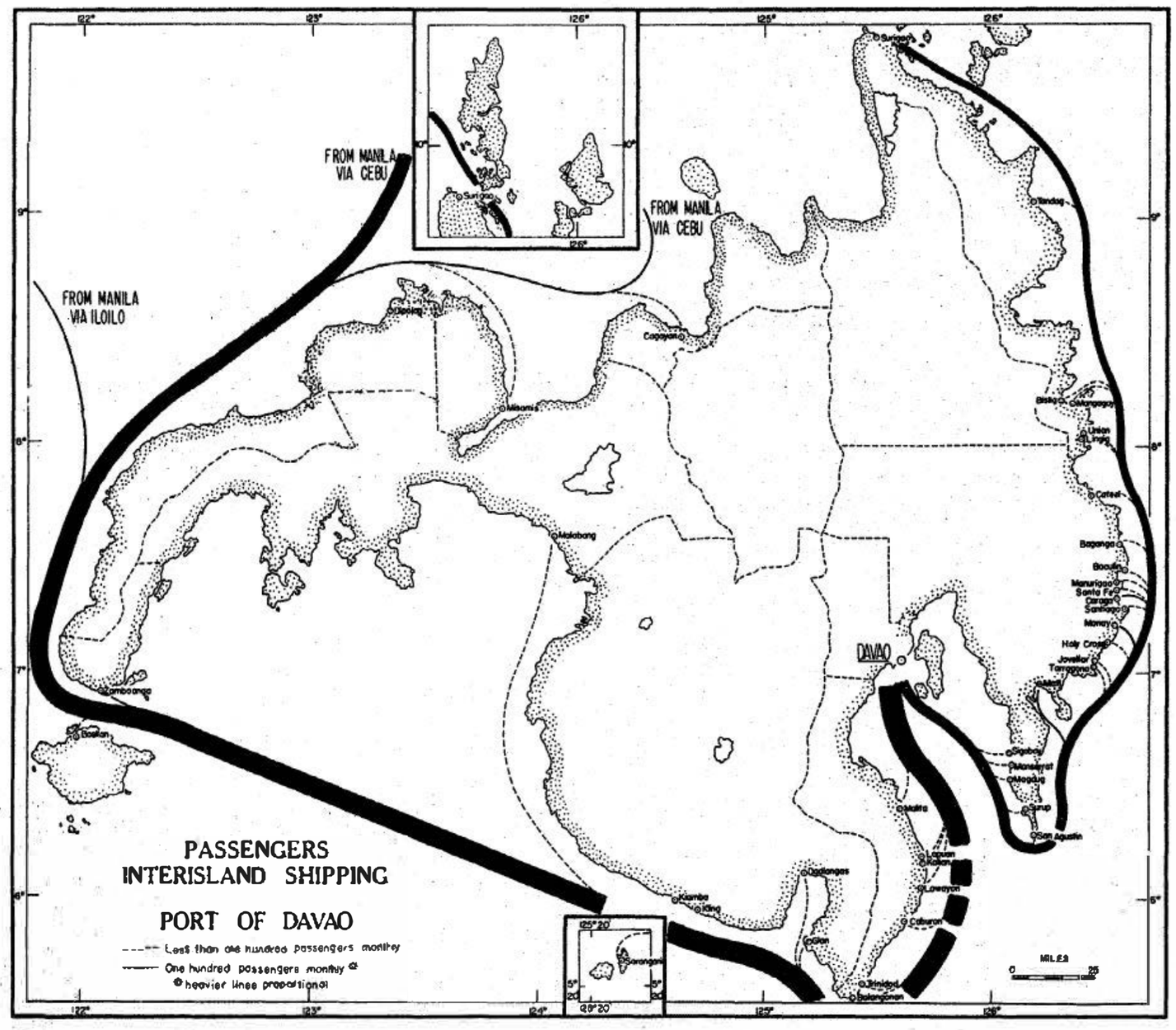
In terms of exportable products Davao is principally an abaca porte Its relative status as a collector of copra fades into relative insignificance within the shadows of the important copra collection ports of Cebu, Manila and Zamboangae Almost the entire abaca production of Davao and that of its hinterland is shipped to Manila for export, or interisland ship operators are reimbursed for the Davao-Manila shipment. Manila receives approximately 43,000 tons of abaca from Davao, annually.

Passengers (Interisland):

The passenger influx, and to a lesser extent, exodus, of the port of Davao is surprisingly high, particularly in view of the peripheral location of the porte Approximately 60,000 passengers are disembarked annually at Davao from all points in the Archipelago and a somewhat smaller number embarks (see Map 30).

Two factors appear to be primarily responsible for the large terminal passenger traffic of Davaoe Davao and its immediate environs offer interesting, and very probably greater, economic opportunities than those found in other parts of the Philippinese The large labor supply which is necessary to maintain and expand the abaca plantations attracts many settlers from overcrowded regions to the north or from areas experiencing chronic unemployment. Similarly, the relatively empty, but productive, lands of southern Mindanao tempt tenant farmers from overcrowded central and northwestern Luzon and from the central Visayanse This is not a large movement at any one time, but a constant movement, and one which is encouraged by the central government.

Perhaps the most cogent factor operating to fill the outbound passengers manifests is the operation of a Filipino cultural trait. Since most of Davao's residents are immigrant, i.e., the large majority are originally from some other sector of the Archipelago, strong sentimental ties exist with removed regions. Every effort is made by these immigrants to return home at least once a year, preferably for the feast day of the village patron saint. Ships entering and leaving Davao are filled with passengers returning to Davao from travels home or leaving Davao for visits to the old home. The Davao residents certainly do not conform to an accepted pattern



Map 30: Flow of passengers inbound to Davao for the year 1953-54.

of a general lack of mobility among southeast Asians.[2]

Fully three-quarters (76 percent) of the incoming passengers landing at the port of Davao embarked at ports on islands lying to the north of Mindanao. Cebu and Manila represent the most important emigrant ports and together they contribute approximately 40 per cent of the total inbound passenger flow. The bulk of the passengers disembarkinglat Davao generally represent long-distance travelers, for Davao is without an important nearby commuting area. The passenger flow is truly interisland in character.

Foreign Commerce:

The port of Davao functions as one of the twelve ports in the Philippines which is staffed by Customs Service personnel. It is directly accessible to foreign shipping. Approximately fifty overseas vessels call at Davao to load copra annually. An additional 75 foreign vesselsiby special permit are allowed to discharge or load cargoes at secondary ports within Davao's Customs District, a district embracing the provinces

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[2]See Karl Pelzer, Pioneer Settlement in the Asiatic Tropics, AGS, New York: 1945.

of Davao and Cotabato. All important maritime nations share in the foreign trade of Davao (see Table XXXII).

Table XXXII: Numbers and Nationalities of Overseas Vessels Entering the Davao Customs' District (1953-54).*

Nationality of Vessels entering Port of Davao		Nationality of Vessels entering Customs' District	
Nationality	Numbers of Vessels	Nationality	Numbers of Vessels
Danish	13	Japanese	62
American	9	American	15
Dutch	5	Danish	14
French	4	Dutch	7
British	4	Norwegian	7
Norwegian	3	British	4
Panamian	3	French	4
German	2	Panamian	3
Swedish	1	Chinese	2
Filipino	1	Swedish	2
		German	2
		Korean	1
		Filipino	1
Total	45	Total	124

*Source: Outgoing Foreign Manifests filedlat the Customs' District office, Davao City 1955.

Statistics filed at the port of Davao, curiously, show little direct export of Manila hemp. Owing to interisland shipping agreements and enforced by governmental regulation, all abaca from Davao must travel via interisland carrier, whether actually or simulated, to Manila prior to export. This is a pricing mechanism similar in operation to the "Pittsburgh plus" steel price basing system used in the United States, although for different motives. In the fiscal year 1953-54, Davao ranked third among Philippine abaca export ports with 7,778 tons (see Table XXXIII).

The port of Davao also exports large quantities of copra and it ranks fourth among Philippine copra export ports (see Table XXXIV)1. Approximately 46,1000 tons of copra leave the export wharves at Sasa annually. The bulk of the copra, approximately three-fourths, is consigned to European ports, with small shipments destined for United States, South American and Canadian ports. Davao exports only abaca and copra with insignificant shipments of lumber, and Davao exports all the abaca and copra produced in its Customs District. Foreign vessels may secure special permission to call directly at some fifteen smaller ports within the provinces of Davao and Cotabato or within the Davao Customs District. Although these small "outports"

Table XXXIII: Manila Hemp Exports from Major Philippine Ports, 1953-54e*

Manila	73,825 tons
Cebu	9,900 tons
Davao .....e.....	7,778 tons
Legaspi-Tabaco	4,598 tons

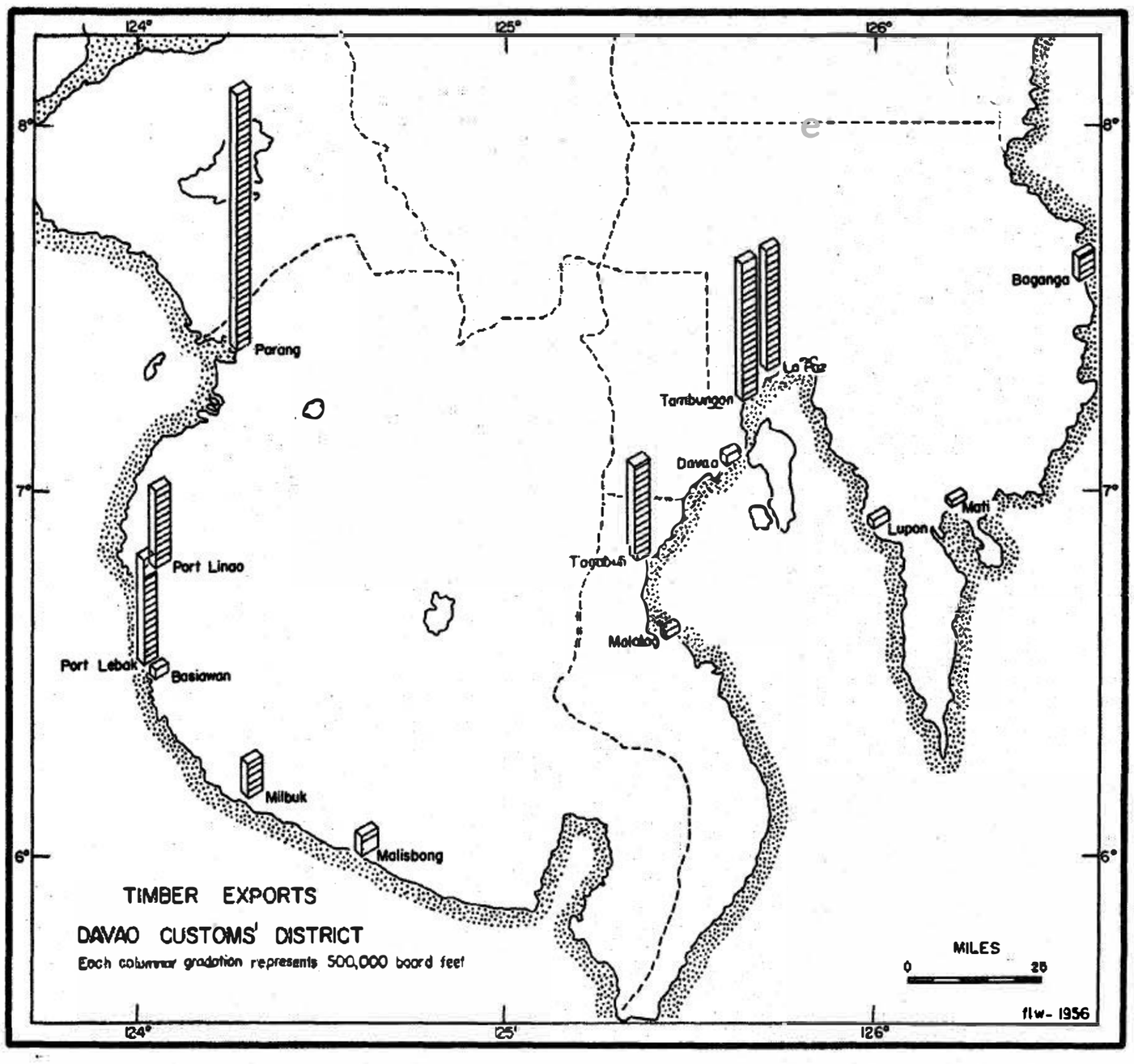
*Source: Fiber Inspection Service.

Table XXXIV: Copra Exports from Major Philippine Ports, 1953-54.*

Cebu	232,000 tons
Manila .....e...	139,000 tons
Zamboanga	48,000 tons
Davao	46,000 tons
Tabaco-Legaspi	45,000 tons
Total copra exports	785,000 tons

*Source: Outgoing Foreign Manifestse at eacheCustoms Districte

export directly overseas, they are very much within the commercial trade area of Davao. All fifteen subports originate lumber and log cargoes for shipment abroad, commodities too bulky to enter interisland movements (see Map 31).e A total of



Map 31: Exports of timber products from ports within the Davao Customs Districtefor the year 1953-54.

approximately 77, 000, 000 board feet of export timber products are produced in and shipped from the Davao Customs District, an amount representing approximately eight per cent of total Philippine timber export.

No other products enter direct export from southeastern Mindanao at the present time. Significant quantities of minerals will soon be added tothe export list with recent mining developments in Davao Province at Mati.

Summary and Conclusion:

The port of Davao, from both a domestic and export commerce standpoint, serves as an important regional trade center for the productive region of southeastern Mindanao. Important quantities of corn, in particular, and rice are supplied by Davao to other Philippine islands. Significant shipments of abaca and copra move to the port of Davao from lesser ports within its trade hinterland. Davao also serves an impor - tant originating port for outbound copra and abaca export shipments.

The port of Davao is limited in its growth and growth possiblities by two basic factors:

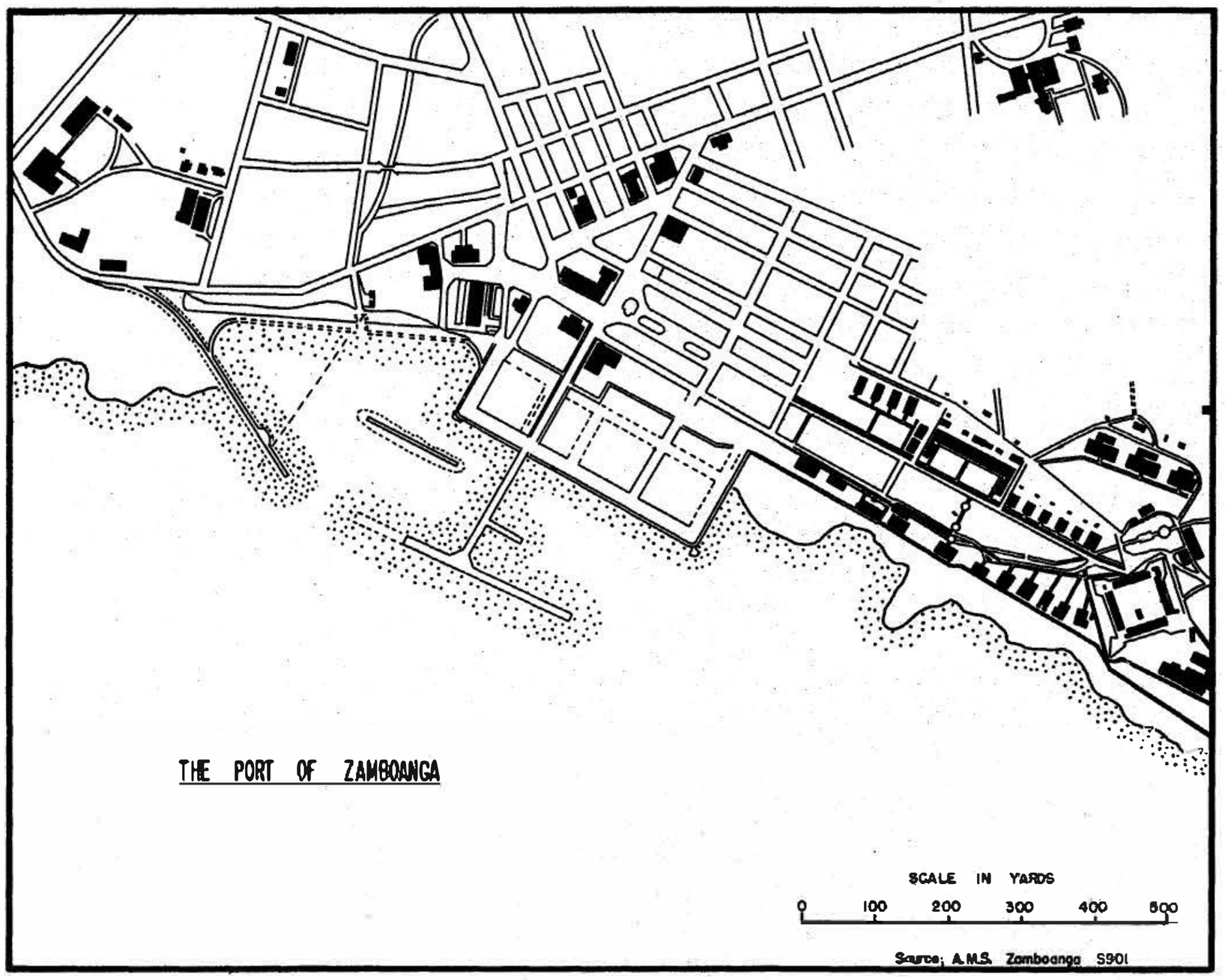
1. A peripheral location, with respect to the nation, which has played and will continue to play a restrictive role in the development of the port of Davaol.

2.1 An extensive, fertile and potentially productive hinterland which is temporarily unproductive, primarily because of small numbers of agricultural settlers.

The peripheral location is, unfortunately, a static condition. The lightly settled nature of the hinterland will correct itself with time.

The Port of Zamboanga:

The porttof Zamboanga is one of the Philippine ports whose commerce is truly interisland in character. Although tucked away in the southwestern corner of the archipelago away from the main center of Philippine economic life, thetport of Zamboanga today challenges, and very probably even surpasses, the port of Iloilo as the third most important Philippine interisland portt



Map 32: The Port of Zamboanga.

A combination of fortuitous geographical circumstances has aided Zamboanga in its growth:

1. For vessels sailing from Luzon and central Visayan Island ports and wishing to call at ports in productive southern Mindanao, the direct route is to round Mindanao to the west. Those vessels which take the western option--and they are in majority--pass within a mile or so of the port of Zamboangat What is more natural than to make Zamboanga a port-of-call.

2. Overseas vessels proceeding from Indonesia to ports within the Philippine, or vice versa,t pass close to Zamboanga.

3. Zamboanga stands at the cultural crossroadstof the Christian and Muslim Philippinest To the west, stretching almost to Borneo, lies the Sulu Archipelago, a coconut-,t abaca- and fish-rich insular region inhabitated largely by Muslimst To the east lie the rich agricultural lands, timber and mineral re-

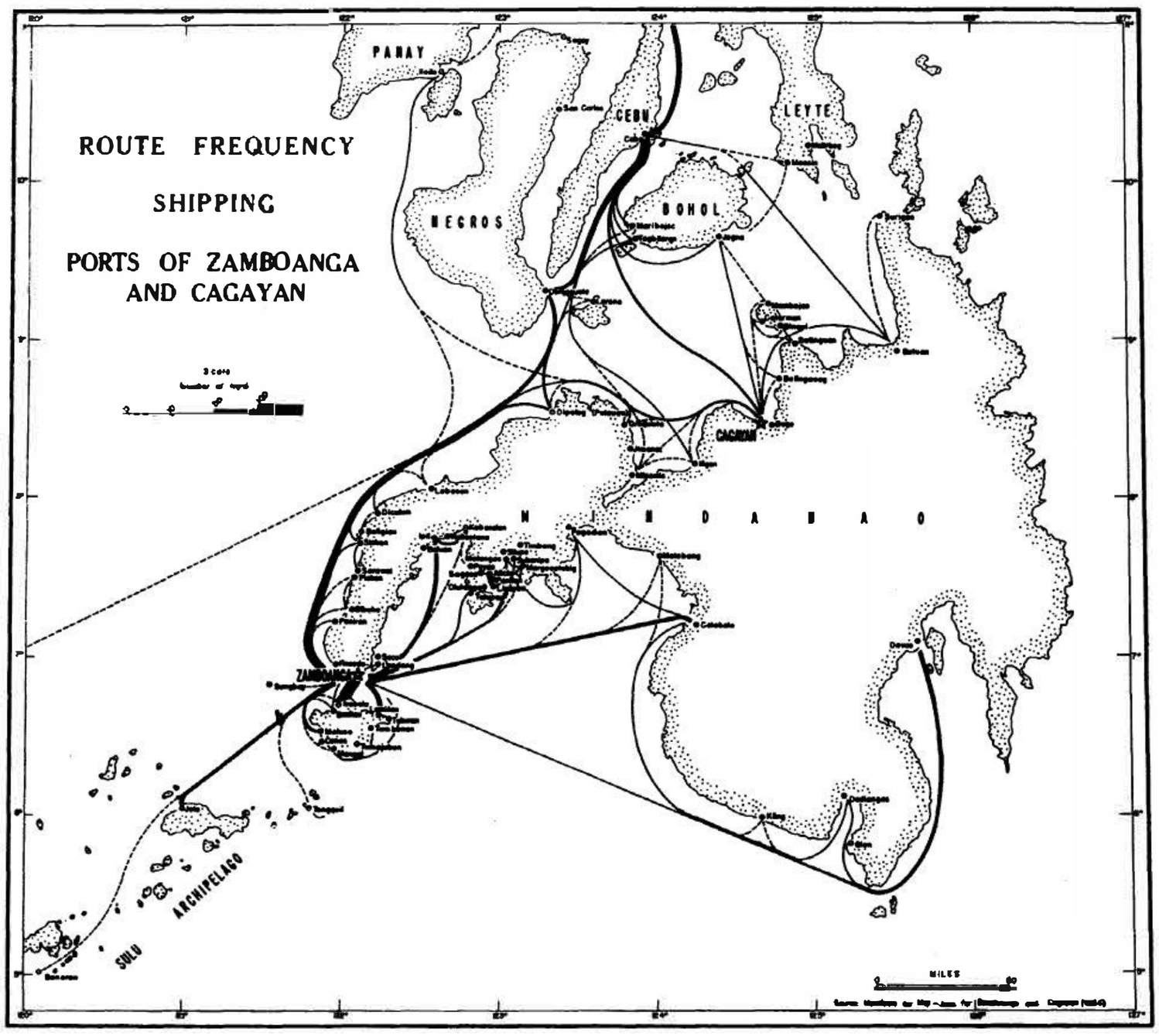
serves and fishing grounds of Moro Gulf and its shores, an area becoming increasingly populated by Christian Filipinos[1].

Today Zamboanga stands in an excellent position, geographically, to service and to expand with these two rich hinterlands (see Map 32).

Frequency of Connections:

An average of 420 interisland vessels enter the port of Zamboanga monthly, representing 157,000 gross registered tons of shipping (see Map 33). Connections with ports on the island of Luzon, principally Manila, and those in the Visayan Archipelago are provided several times daily by vessels of the Philipping interisland core fleet[1]. In addition to the northern connections, Zamboanga is linked to its hinterland by even more frequent sailings of locally operated smaller vessels (see Map 34). That portion of the Philippine interisland fleet operating locally from a base at Zamboanga numbers several hundreds of which approximately eighty (3,000 gross registered tons of shipping) are active regularly in the transportation of goods to and from Zamboanga and its hinterland.

An active domestic trade often fosters an active external trade[1]. In addition to the vessels of the interisland fleet Zamboanga plays host to some 300 overseas vessels annually (1953-54).



Map 33: Routes and frequency of interisland shipping inbound to Zamboanga and Cagayan during a 31-day period May 16-June 15, 1954.

Food Commoditiesa(Interisland):

Zamboanga reliesato a heavy degree upon food commoditiesaproduced in the hinterland to supplement its inadequate subsistence base (1948 population--103,317).[1] Zamboanga's general lack of self-sufficiency is largely the result of limited agricultural lands and theapresenceaof drier climatic conditions than found in other partsaof the archipelagoa Rice, corn and fish products are brought to Zamboanga from its hinterland in regular, and rather large,aquantitiesa

Among the inbound food commodities rice shipments are most important,aquantiatively and value-wise. Annual movements of rice to Zamboanga approximate 15,a000 tons (268,a800 sacks).

Rice shipments into Zamboanga show sharp seasonal fluctuationsa The months of September through November represent the main harvest months for the rice-producing areas in Zamboanga's hinterland and during each of these months approximately 2,000 tons of rice are inboundato Zamboangaa The smallest shipments are recorded during the main planting months of May and June with approximately 500 tons of rice inbound to Zamboanga monthly.

Ports along the shores of Moro Gulf supply the bulk of the rice destined for Zamboanga with the port of Cotabato alone supplying 38 per cent of the total inbound rice shipments. Smaller rice supplies originate from the Visayan Group and from Luzon, along the western shores of Zamboanga Norte andafrom the Davao Gulf area (see Table XXXV).

Table XXXV: Inbound Rice Shipments to Zamboanga, by Region of Origina*

Region of Origin	Per Cent of Total Rice
Moro Gulf	77a0
Visayans	3.4
Luzon	1.1
Zamboanga Norte	9.9
Davao Gulf	6.7
Others	2.9

*Source:a Coastal Manifests at Zamboanga, 1953-54.

Inbound corn shipments to Zamboanga are smaller than those of rice, approximating 8,a000 tons annually.a Corn arrives primarily during the months of May and June when rice is in short supply. Corn in Mindanao has to ripen at given seasons, depending upon the time of plantinga Cotabato and Davao serve as the principal ports of origin for corn cargoes for Zamboanga, 41.7 per cent and 40.2 per cent of the total inbound corn, respectivelya

[1] 1948 Census of the Philippines, op. cit. p. 245.

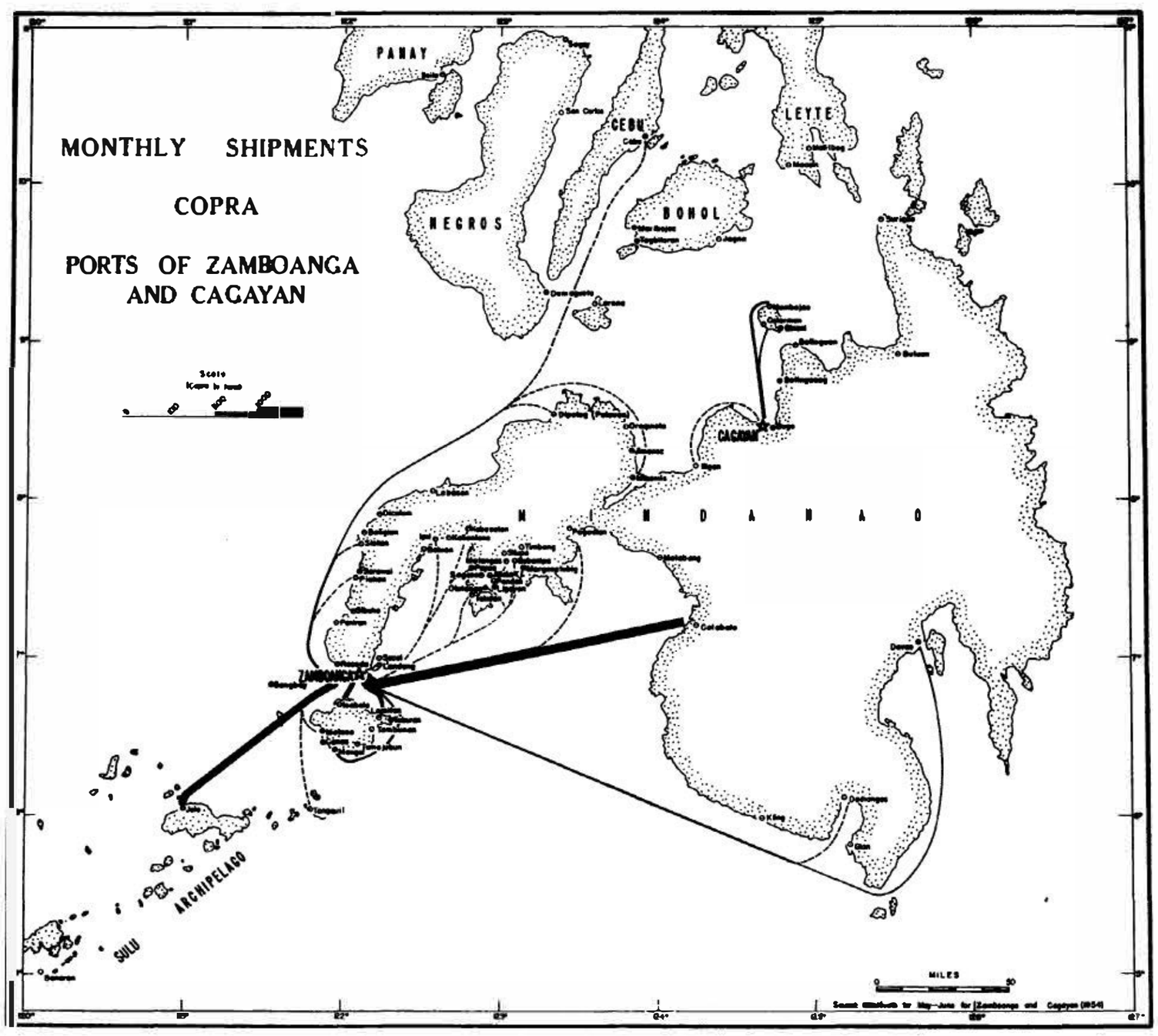
To further supplement the food supply of Zamboanga there is an annual movement of some 4,000 tons of fish and fish productsl. Whereas all ports in Moro Gulf contribute small quantities of fish, the chief source of inbound fish cargoes is the Sulu port of Jolo (80%).

Zamboanga does not consume all of the fish caught in nearby waters and brought to it by interisland carriers. A considerable quantity of fish is supplied by Zamboanga to Davao (1,000 tons), Cebu (500 tons) and northern Mindanao, annually.

Export Commodities:

Copra is the lone Philippine export commodity in whose collection the port of Zamboanga plays an important rolel. In addition to the substantial shipments of copra, the interisland fleet brings only small quantities of abaca and timber, 1,500 tons and 3,000,000 broad feet annually, respectively. However, large shipments of timber are directly exported from production sites within Zamboanga's hinterland (and within the Zamboanga Customs district).

Inbound copra shipments are remarkably regular in volume and source regions, clearly reflecting the ability of the coconut palm to ripen nuts in all months. An amount of copra varying between 2,000 to 2,500 tons pass over the wharves at Zamboanga monthly (see Map 34).



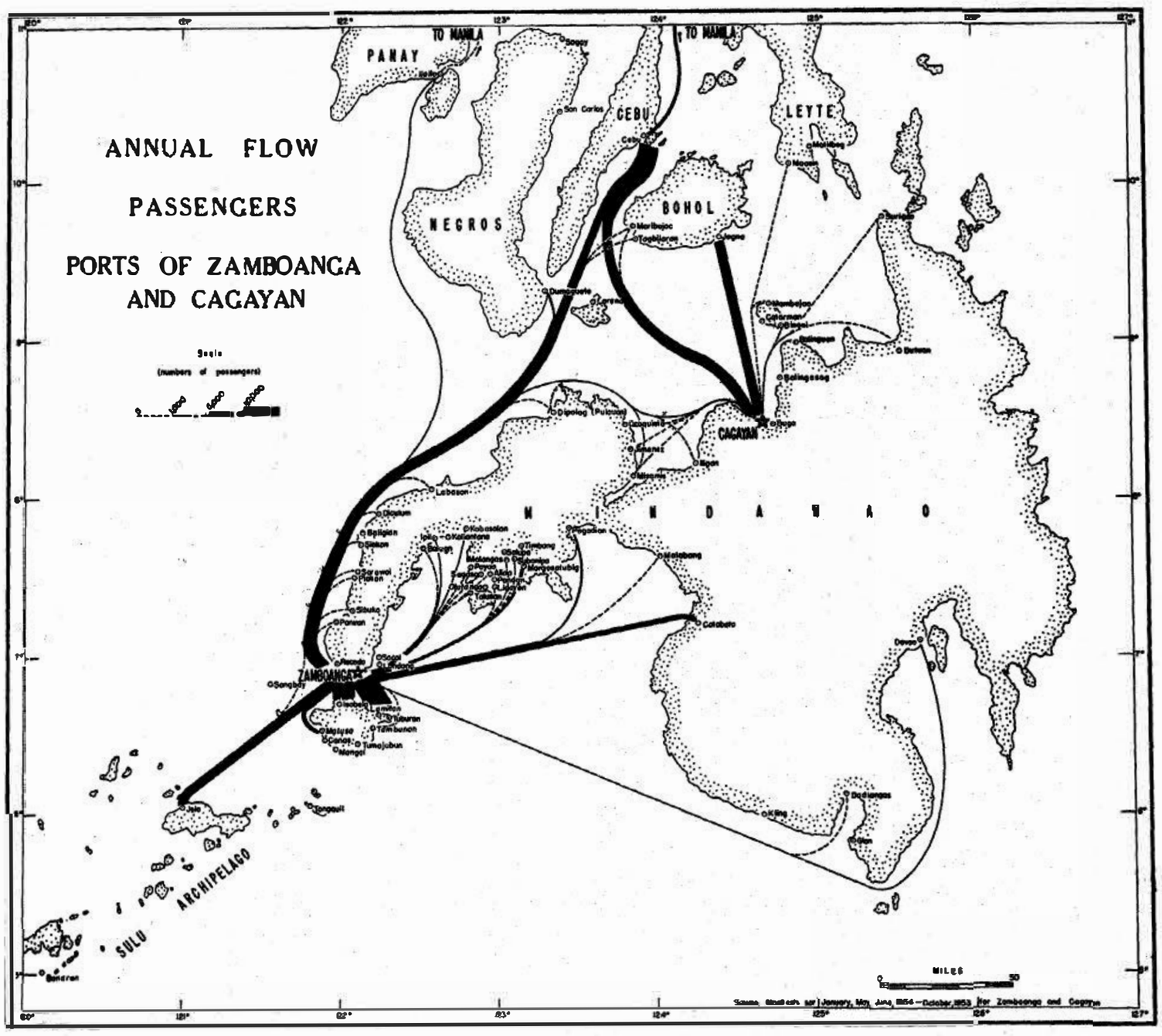
Map 34: Flow of copra (in tons) inbound to Zamboanga and Cagayan during a 31-day period May 16-June 15, 1954.

The bulk of Zamboanga's inbound interisland copra comes from the two ports of Cotabato (26%) and Jolo (25%), the latter, at least in part, collecting supplies from its hinterlands, i.e., the islands which comprise the Sulu Archipelagoe Important, although smaller, quantities of copra originate from the ports of Isabela (10%), Lamitan (10%) and Mangal (8%) on nearby Basilan Island and from Davao (5%).

The major portion of inbound abaca comes from Joloe The logs and lumber come mainly from ports along western and southern Mindanao and from Basilan Island.

Passengers:

Zamboanga services some 100,000 disembarking andea similar number of embarking passengers annually. In addition, many ten of thousands of intransit passengers pass through the port of Zamboanga, generally laying over for several hours in the port. The function of Zamboanga as a shopping center for Filipinos living on nearby Basilan Island tends to inflate the total of passengers,eactually contributing 57 per cent of the total; but still an impressiveeinterisland passenger flow remains with Luzon and the Visayas (13%), northern and western Mindanao (3%), the Sulus (10%) and southern Mindanao (see Map 35). Zamboanga, in turn, embarks many thousands of these passengers for further destinations within its hinterlande



Map 35: Flow of passengers inbound to Zamboanga and Cagayan for the year 1953-54e

Foreign Commerce:

The port of Zamboanga has a fairly active and diversified foreign commerce. Because of a busy foreign commerce the administrative offices of the Zamboanga Customs District, a district embracing the two Zamboanga provinces, are located in the city. This customs district is an important originator of export shipments of copra and logs and lumber.

Zamboanga port functions basically as a copra exporter as its domestic commerce indicates. From the port are exported small quantities of other coconut products and coconut derivatives, e.g., copra cake, coconut oil and dessicated coconut, and several miscellaneous products (see Table XXXVI).

Table XXXVI: Exports from the Port of Zamboanga, by Commodities, 1953-54.*

Commodity	Amount	Destination
Copra	47,1621.4 tons	(see Table XXXVI)
Copra Cake	3,509.3 tons	(U. S.)
Dessicated Coconut	8871.7 tons	(U. S.)
Coconut Oil	5,783.4 tons	(U.lS.)
Rattan	172.9 tons	(U. S.)
Lumber	197,715 board feet	(U. S.)
Shells	493.2 tons	(U. S., Japan)
Sponges	1.3 tons	(U. S., Japan)
Grass Hats	2.3 tons	(U.lS.)
Rubber	47.5 tons	(U. S.)

Table XXXVII: Copra Shipments from the Zamboanga Customs District, by Port and Destination, 1953-54 (in metric tons).*

Destination	Zamboanga	Isabela	Lamitan
United States	22,648.4	2,482.0	190.4
Europe	22,13431.0	8,168.3	--
Venezuela	1,329.8	519.0	--
Colombia	1,290.2	--	--
Total	47,1621.4	11,1169.3	190.4

*Source: Outgoing Manifests at Zamboanga, 1953-54.

Large quantities of logs and lumber are exported from ports within Zamboanga's Customs jurisdiction (see Map 36). Approximately 138,000,000 board feet of timber are exported from this district annually, an amount representing approximately fifteen per cent of total Philippine timber export. The greater share of the timber is transported to Japan on Japanese vessels for manufacture (see Tables XXXVIII and XXXIX).

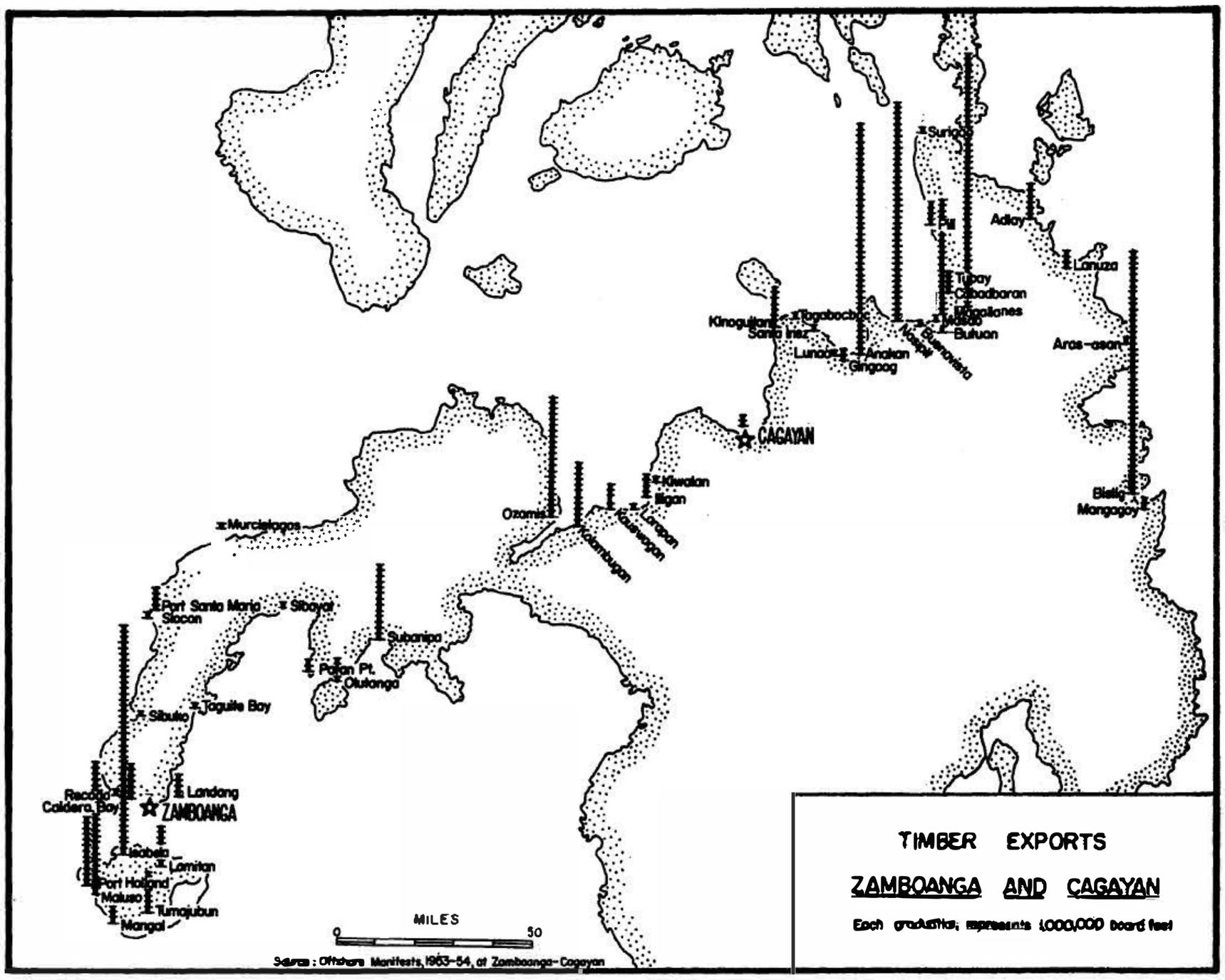
Table XXXVIII: Timber Exports from the Zamboanga Customs District, by Destination, 1953-54.*

Destination	Amount (in board feet)
Japan	104, 052, 869
United States	29, 032, 244
Taiwan	3, 468, 197
Korea	2, 300, 235
Hongkong	34,772
Europe	36, 921
Total	138, 925, 238

Table XXXIX: Numbers and Nationalities of Vessels calling at Ports within the Zamboanga Customs District, 1953-54.*

Nationality	Total	Copra Loaded	Timber Loaded
Japanese	94	3	83
United States	62	23	40
Norwegian	53	14	27
Danish	24	15	3
Dutch	22	8	11
British	11	8	2
Chinese	10	--	7
Filipino	9	--	1
French	6	6	--
Swedish	6	5	1
Panamanian	1	1	--
Italian	1	--	1
Korean	1	--	1
German	1	1	--
Total	301	84	177

*Source: Outgoing Manifests at Zamboanga, a 1953-54.



Map 36: Exports of logs and lumber from ports within the Zamboanga and Cagayan Customs Districts for the year 1953-54.

Summary:

Zamboanga is one of the more important Philippine interisland ports, probably ranking third among them in its domestic commercee The development of the port has stemmed largely from its nodal geographical position with respect to southern Mindanao and the Sulu Archipelagoe

Rather large quantities of rice and corn are brought to Zamboanga for local consumption from production sites particularly in southern Mindanaoe Large supplies of fish are received from the Sulu areae Copra, the only important export commodity collected at Zamboanga, is derived from production areas on Basilan, Jolo and southern Mindanao.

Foreign ships call at Zamboanga in large numbers. In addition to its commercial functions the port of Zamboanga serves as the administrative center for a two-province Customs district.

The Port of Cagayan de Oro:

The city of Cagayan de Oro and its port constitute an important entrepot for northern Mindanao from Dipolog in Zamboanga Norte Province in the west to Surigao in the east. Simultaneously Cagayan is very definitely within the hinterland of the port of Cebu, economically and culturally, as is all of northern Mindanao.

Cagayan serves the province of Oriental Misamis as its commercial and political capital, and at the same time it also provides the only transportation window for basically landlocked Bukidnon Provinces Similarly,sin its function as the site of the Cagayan Customs District headquarters, the city of Cagayan provides financial and administrative services for the five provinces of Agusan, Bukidnon, Oriental Misamis, Lanao and Occidental Misamis.

With this impressive array of services to an extensive, productive and reasonably densely populated hinterland, one would suppose an active interisland commerce at, and through, the port of Cagayan.s Such is not the cases Large amounts of commerce pass through numerous northern Mindanao ports of equal or greater commercial stature than Cagayan.s Whether the lack of trade is due most to the existence of these dozens of minor ports scattered along the northern littoral, or tosa general self-sufficiency of the hinterland with regard to food staples, or to the presence of a reasonably good highway network paralleling the coast, thus providing effective land connection, is undeterminables Most probably the failure of the port of Cagayan to develop important commercial stature in keeping with its rich hinterland is due to a combination of these restrictive factors.

Frequency of Connections:

The numerical frequency of interisland vessels, the sizes of available carriers and their prior or subsequent ports-of-call would appear to point toward an active interisland trade at Cagayans Each month approximately eighty vessels, representing 62,000 gross registered tons of interisland shipping, enter the port of Cagayan (see Map 33). Fully two-thirds or more of the total entering vessels are representatives of the Philippine interisland core fleet. These larger, regularly scheduled ships provide frequent connections between Cagayan andsports throughout the Archipelago; these ports of contact are truly interisland in character. Frequent service, i.e., several times weekly, is maintained with the important interisland trade foci of Manila and Cebus Less frequent service is provided with southern Mindanaos Two locally operated vessels maintain Cagayan's connection with its northern Mindanao hinterland, providing semi-weekly service to the east and to the west.s[1]

Food Commodities (Interisland):

Among the basic food staple commodities generally transported by Philippine interisland vessels, i.e., rice, corn, meat and fish, only the latter is represented

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[1]The intra-coastal service seems largely for the purpose of collecting empty bottles for the Coca-Cola bottling works in Cagayan.

inbound to Cagayan in significant quantities. Thirty-five to forty tons of fish and fish products are brought to Cagayan monthly, largely from the ports of Zamboanga andl Cebu. Even this shipment does not represent a large sum, but it does serve to point out the general self-sufficiency of Cagayan and its hinterland in most food staples. Small and infrequent shipments of rice and corn reach Cagayan principally from Cebu and Manila during critical field periods.

Instead of lacking in basic foodstuffs the entire northern coast of Mindanao functions as an important originator of rice and corn shipments for the Archipelago, but particularly for Cebu and Manila. Through the port of Cagayan alone moves a probable annual tonnage of 2,000 tons of rice and 2,400 tons of corn to Manila and 800 tons of rice and 4,500 tons of corn to Cebu. Northern Mindanao as a region contributes substantially to these two deficit ports, only a part of which transhipsover the wharf at Cagayan (see Table XL).

Cebu supplies the bulk of the small inbound shipments of livestock to Cagayan although it is assisted by shipments from the port of Jagna on Bohol.

Non-staple foodstuffs, i.e., canned goods, imports, etc., are contained in the miscellaneous cargoes from Cebu and Manila and probably total approximately 1,000

Table XL: Annual Shipments of Corn and Rice to Manila and Cebu from Northern Mindanao, 1953-54.*

Port of Origin	Corn		Rice	
	To Manila(tons)	To Cebu(tons)	To Manila(tons)	To Cebu(tons)
Cagayan de Oro	2,400	4,500	2,000	800
Iligan	470	10,000	2,400	1,500
Misamis (Ozamis)	400	400	8,800	2,600
Tubod	--	4,300	--	5,400
Others	--	--	--	1,000
Total	3,270	19,200	13,200	11,300

*Source: Coastwise manifests at Manila and Cebu, 1953-54.

tons or less per month.[2]

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[2]This represents an estimate based upon foodstuffs representing one-half of the miscellaneous cargoes after deducting the shipments of bulk petroleum products.

Export Commodities:

The role of the port of Cagayan as a collection point for export commodities is confined to the assemblage of small quantities of copra (see Map 34). Cagayan gathers the bulk of its export copra from production sites along the north central coast, a collection region in close proximity to the port by means of overland communications. The small quantities of copra arriving by water are largely from the offshore island of Camiguin and from southern Bohol.

Neither abaca nor timber is collected at Cagayan.

Passengers:

The relatively large numbers of passengers disembarking and embarking at Cagayan aptly point up the principal function of the port. Cagayan is a convenient port for those persons coming from various parts of the Archipelago who wish to stop at the capital or to proceed to interior regions of northern Mindanao, e.g., Bukidnon. The interior regions today are very much pioneer agricultural lands, potentially productive, but relatively unsettled. Settlers from Manila and central Luzon and from the crowded central Visayans find their way into these areas generally through the port of Cagayan.

Approximately 25,000 passengers disembark from interisland ships at Cagayan annually (see Map 35). The vast majority are from Manila, Cebu and Bohol Island (see Table XLI). A somewhat lesser number of passengers embark at Cagayan for Archipelago destinations.

Table XLI: Passengers Disembarking at Cagayan, by Place of Origin, 1953-54.*

Place of Origin	Per Cent of Total Passengers Disembarking
Bohol Island	44
Cebu City	20
Manila City	15
All Others	21

*Source: Coastwise manifests at Cagayan for May 15-June 15, January, 1954, October, 1953 times 4 = Annual.

Foreign Commerce:

The port of Cagayan is primarily a copra exporting port. The Customs district, which Cagayan administers, is chiefly a timber exporting region.

Slightly more than 17,000 tons of export copra are shipped from the wharf at Cagayan annually and an additional 48,000 tons are exported from other ports within the Cagayan Customs District (see Table XLII).

Table XLII: Copra Shipments from Cagayan Customs District Ports, by Destination, 1953-54.*

Destination	Amounts of Copra (in metric tons)					
	Cagayan	Medina	Ozamis	Nasipit	Surigao	Cabug
United States	17,464.2	18,898.6	2,032.0	5,511.6	508.0	1,391.8
Europe	--	1,870.0	6,908.8	--	8,670.8	508.0
Colombia	--	812.8	1,320.8	--	--	--
Total	17,464.2	21,581.4	10,261.6	5,511.6	9,178.8	1,899.8

*Source: Outgoing Manifests at Cagayan, 1953-54.

The Cagayan Customs District originates approximately one-fourth of all Philippine timber exports, or 272 million board feet (see Table XLIII and Map 36).

Table XLIII: Timber Shipments from Cagayan Customs District by Destination, 1953-54.*

Destination	Amount (in board feet)
Japan	246,009,797
United States	16,991,915
Taiwan	5,750,666
Okinawa	2,325,000
Korea	1,204,000
Total	272,281,378

*Source: Outgoing Manifests at Cagayan, 1953-54.

Ships of many nationalities carry cargoes originated from the Cagayan Customs District (see Table XLIV)s Among them the vessels of the resurgent Japanese mers chant marine are dominants Japan purchases a large portion of the rough logs, transports them to Japan on Japanese vessels, and there converts the logs to lumber, plywood and veneer for transhipment to the United Statess

Table XLIV: Numbers and Nationalities of Vessels calling at Ports within the Cagayan Customs District, 1953-54.*

Nationalitye	Total	Copra Loaded	Timber Loaded
Japanese	184	2a	179
United States	75	28	16
Norwegiane	32	9	22
Danish	28	7	8
Filipino	17	1	10
Chinese	14	--	12
British	13	4	2
Dutch	8	2	7
Swedish	6	2	--
French	5	5	--
Panamanian	4	3	--
German	1	1	--
Total	387	64	256

*Source: Outgoing Manifests at Cagayan, 1953-54.

In addition to exports of copra and timber products from the Cagayan district, there are small quantities of chrome ore from Osmena Bay (Surigao), approximating 4,000 tons, and virtually all of the Philippine-produced canned pineapple (59,292 tons) from the Del Monte pineapple plantation in Bukidnon. The latter export is through the port of Bugo (Oriental Misamis).

Summary:

The port of Cagayan performs more as a way-stop and origination point rather than participating actively in terminal Philippine interisland commerce. The quantities of food and export commodities inbound to Cagayan are relatively small. Large amounts of corn and rice produced in the hinterland of Cagayan are shipped to Manila and Cebu. Numbers of passengers embarking and disembarking at Cagayan are proportionally more important than commodities.e The northern Mindanao ports of Iligan (Lanao) and Misamis compete strongly with Cagayan for available commerce.

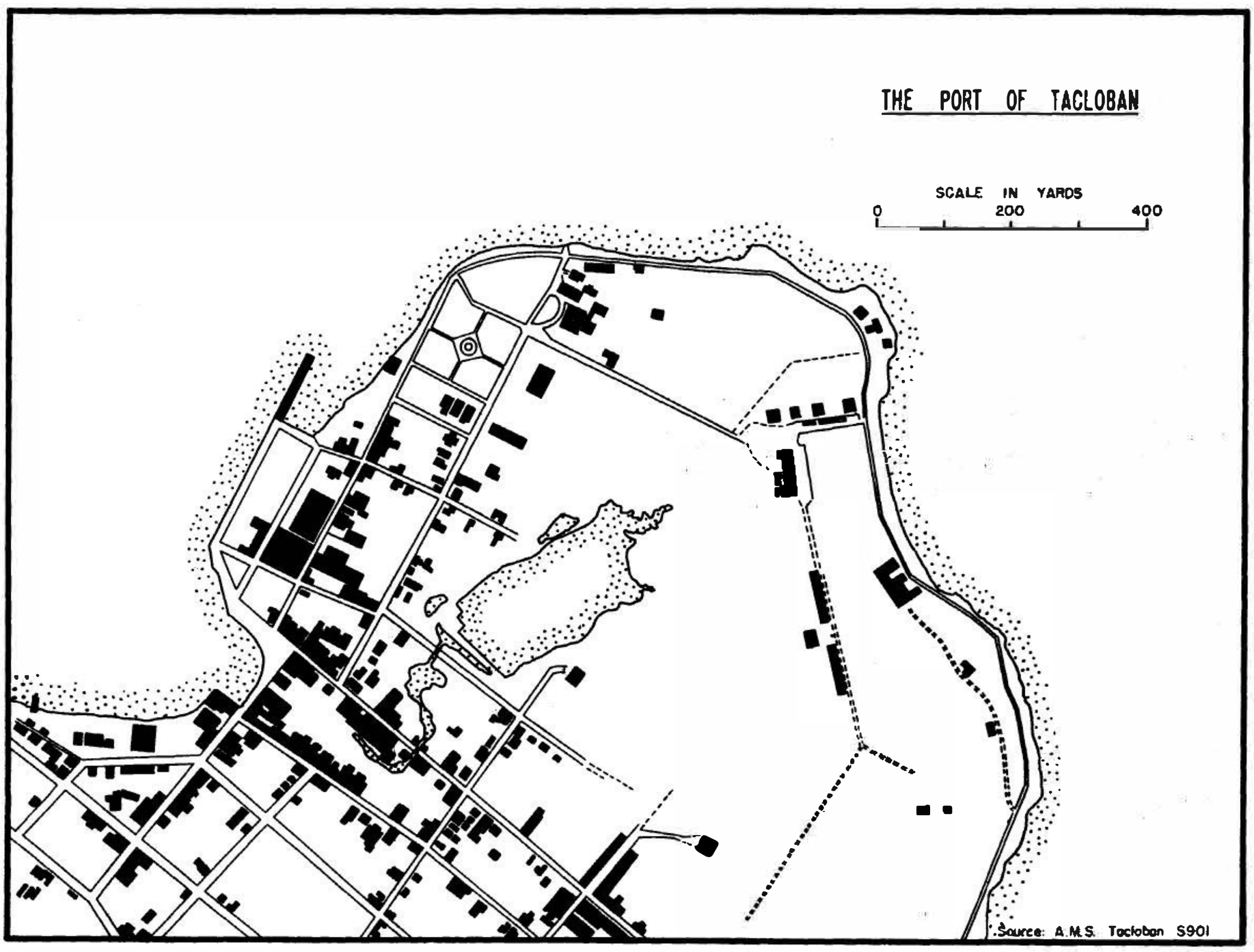
Cagayan serves as the administrative center for a productive Customs district. From the Cagayan District is exported large quantities of lumber and copra, almost the entire Philippine export of canned pineapple and small quantities of chrome ore.

The Port of Tacloban:

The port of Tacloban, while ranking among the ten most important Philippine ports in interisland commerce, is not of sufficient stature to challenge the positions of the big four, i.e., Cebu, Manila, Zamboanga and Iloilo. In servicing the less important ports on the islands of Leyte and Samar, the interisland port of Tacloban serves a region of general self-sufficiency. The hinterland of Tacloban produces neither large quantities of export commodities nor products for archipelago distribution. On the other hand it does not require large amounts of manufactured goods. Because of the non-commercial aspect of this hinterland, neither land nor water transport has developed extensively.

Although the physical port and harbor facilities are adequate for greatly increased traffic,[1] nevertheless traffic passing through the port of Tacloban remains small. Those factors which appear responsible for present limitations on traffic and growth for the port of Tacloban include:

1. An economic hinterland demanding little from, and producing little for, interisland commerce.



Map 37: The Port of Tacloban.

[1]During World War II at the peak of supply demands on the Leyte invasion, approximately 20,000 tons of cargo were unloaded daily at Tacloban and across the beaches of eastern Leyte.

2.1 A peripheral location on the extreme eastern coast of the archipelago removed from the main traffic arteries of interisland commerce.

3.1 A difficult and often dangerous passage through narrow San Juanico Strait, thereby placing restriction upon east-west traffic.[2]

Site and Regional Location:

The harbor of Tacloban lies on the western extremity of San Pedro Bay, a bay which is formed by the east coast of Leyte and the southwestern peninsula of Samar, and is partially protected from its open waters by Panirugan Point (see Map 37). Tacloban port is located at the southeastern entrance to San Juanico Strait, the narrow, winding body of water which separates Leyte Island from Samar. Approach to the port can be gained through Surigao Strait and San Pedro Bay. San Juanico Strait offers a more restrictive entrance.

Port facilities at Tacloban are provided for by a 1,200-foot long concrete marginal wharf with depths alongside of from 16 to 24 feet. A 30-ton crane is avilable dockside, principally to assist overseas vessels with their loading.[3]

Tacloban, in addition to its service as the capital city of Leyte Province, performs financial and commercial functions for a rather extensive hinterland embracing northern and eastern Leyte and eastern, western and southern Samar. Northern Samar is served primarily from Legaspi, Manila and Cebu; southern and western Leyte are serviced more frequently from Cebu. In addition to representatives of the Philippine interisland core fleet which provide the connections to other major Philippine interisland ports, a fleet of 277 small vessels, representing 5,800 gross registered tons of shipping, is registered in, and serves the ports of, the Tacloban Customs District (see Table XLV).

Table XLV: Vessels Registered in the Tacloban Customs District, and those registered in San Pedro Bay, 1955.*

Tacloban Customs District Vessels			San Pedro Bay Vessels Only	
Type of Vessel	Number of Vessels	Gross Tonnage	Number of Vessels	Gross Tonnage
Powered	239	5,264	114	1,980
Sail	21	192	--	--
Barge	17	420	5	150

*Source: Registry of vessels at Tacloban Customs House, 1955.

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[2]"San Juanico Strait, connecting Janabatas Channel with Tacloban Harbor, is about 12 miles long in a general north and south direction. It has an average width of from 0.3 to 0.5 mile, reduced in two places to barely 200 yards, and carries a varying depth of from 5 to 15 fathoms. . . The flood current sets northward and the ebb southward, attaining at times a maximum velocity of from 4 to 5 knots in some places of the strait, causing violent eddies and tide rips." Coast Pilot, I, op. cit. pp. 546-571

[3]Coast Pilot, I, op. cit. p. 575.

Historical Development:

Tacloban and its hinterland have been slow to develop economically. Actually Tacloban has functioned for a long time as the regional trade center for the eastern Visayan Islandse The port was provided with a Customs Service office in 1874 and then opened directly to foreign tradee Apparently the opening of Tacloban did not bring about immediately the desired increase in collection and distribution functions, for none of the major arteries of interisland commerce included the port during the Spanish period.

The incoming American administration pioneered new interisland routes with U. S. Coast Guard vessels in an attempt to provide an effective interisland transport net for the Philippines. Two new routes were inaugurated connecting Tacloban and its hinterland to the mainstreams of interisland commercee In 1905-06 the Coast Guard routes were opened for public bidding by private shipping concerns, and eventually the government vessels were withdrawn. Since the inauguration of regular service the numbers and tonnages of interisland vessels entering the port of Tacloban have increased slowly but steadily.

Table XLVI: Coast Guard Routes Including Tacloban, 1905.*

Route A:	Departing Manila on the first and fifteenth of each month for Batangas, Lucena, Boac, Pasacao, Sorsogon, Calbayog, Catbalogan, Tacloban and Surigaoe
Route B:	Departing Tacloban on the sixth and twentieth of each month for Carigara, Caibiran, Naval, Leyte, San Isidro, Villaba, Palompon, Ormoc, Cebu, Baybay, Hindang, Hilongas, Maasin, Malitbog, Liloan, Cabalian, Hinunangan and Abuyog.

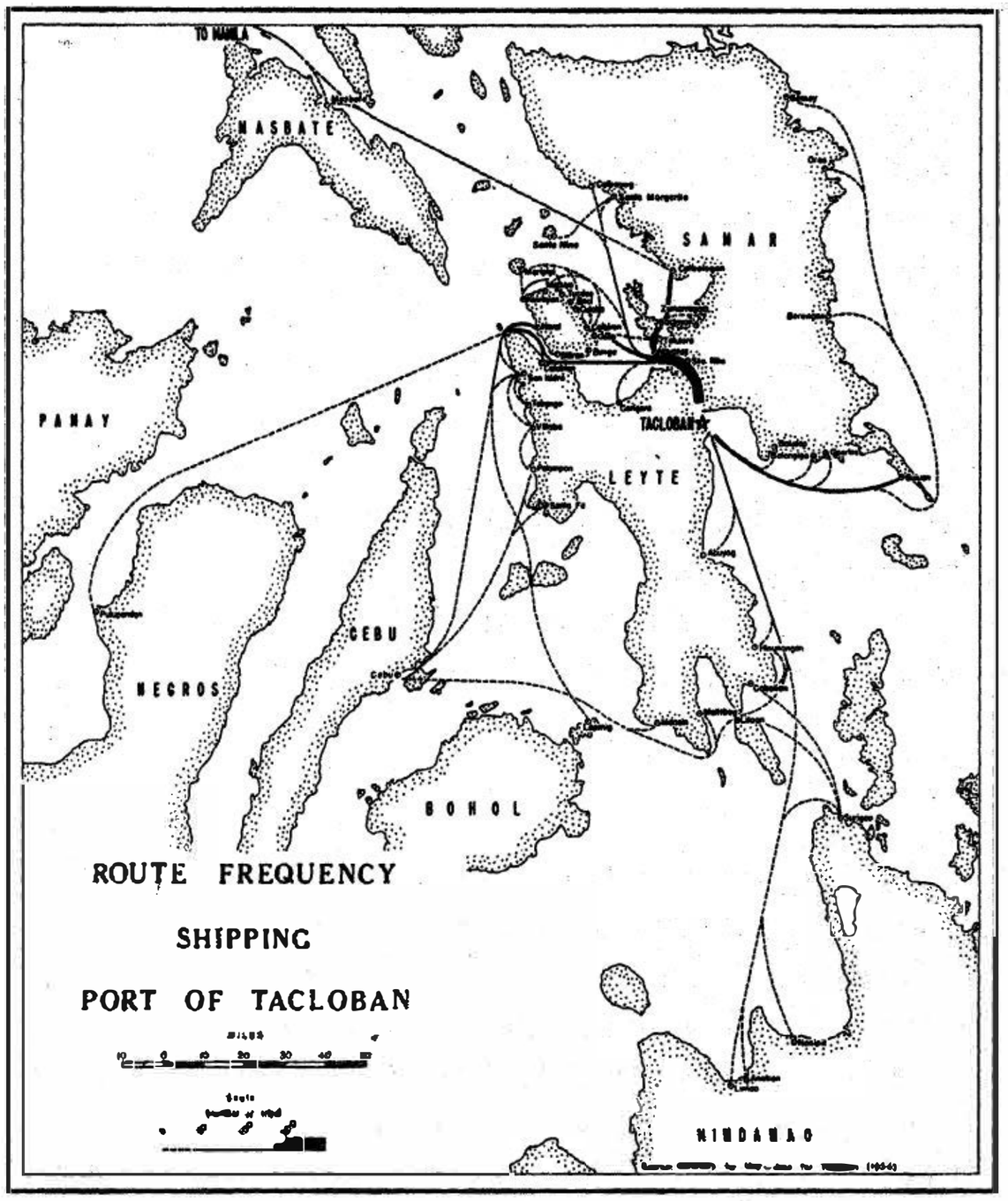
*Report of the Philippine Commission, III, 1906.

Frequency of Connection:

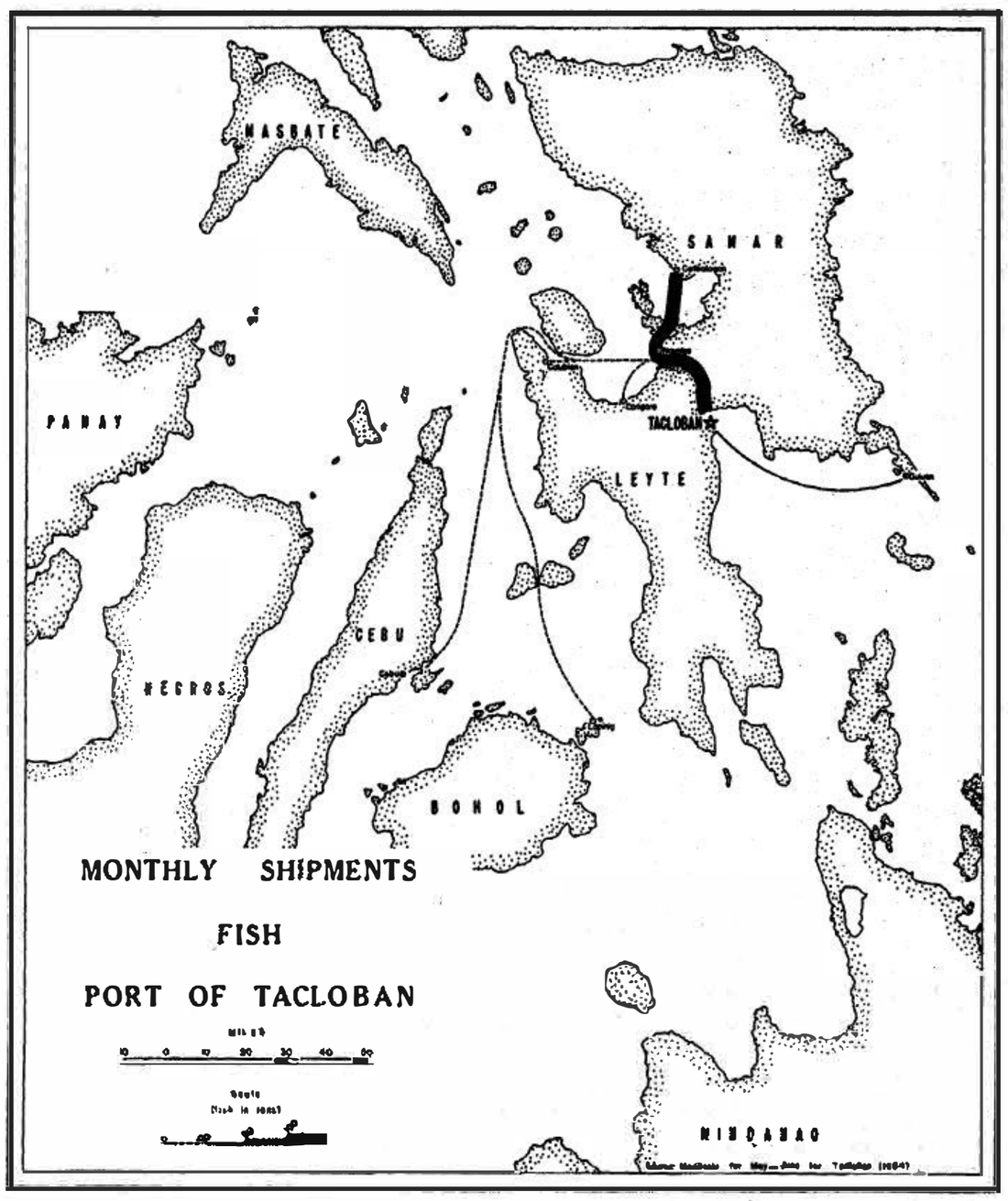
Each month there are 80-90 entrances to the port of Tacloban by vessels of the interisland core fleet (see Map 38). Tacloban is thus provided with daily service to Cebu and with four to five times weekly service to Manila and northern Mindanao.e At the same time locally operated vessels supplement core fleet operations with 200 entrances monthlye These feeder operations provide daily service to Catbalogan and Guiuan on Samar and to ports of northern Leytee Less frequent service is maintained with the remainder of Tacloban's hinterland.

Food Commodities (Interisland):

Fish, corn and rice are all brought to Tacloban in quantity by interisland carriers at certain seasons to supplement local supplies. Shipments of fish and fish products are particularly notable in that they are relatively large, regular in amount and constant in their source or point of origin. Approximately 100 tons of fish arrive monthly at Tacloban primarily from the port of Catbalogan (75%). Smaller quantities originate from Carigara Bay (8%) and Guiuan (5%) (see Map 39). Tacloban, in turn,



Map 38:
Routes and frequency of inbound interisland shipping at Tacloban during a 31-day period May 16-June 15, 1954.



Map 39:
Flow of fish (in tons) inbound to Tacloban during a 31-day period May 16-June 15, 1954.

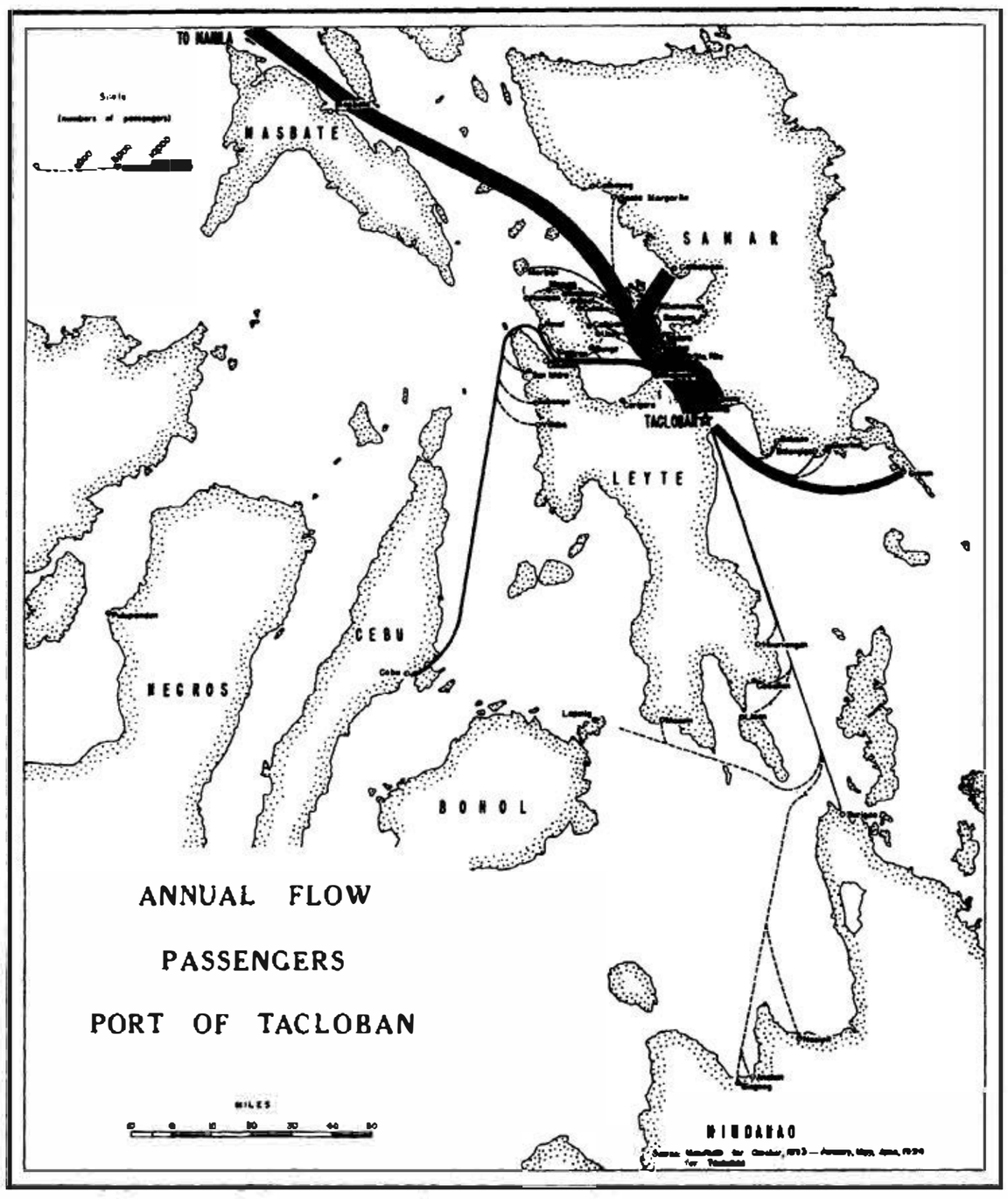
supplies part of its fish to Cebua

Inbound corn shipments show marked seasonalitya An amount of corn approximating 7,000-8,000 tons are inbound to Tacloban annually. The harvests months from September through January represent the months of maximum corn shipments with approximately 900-1,000 tons monthly. Cebu originates 75-80 per cent of Tacloban's inbound corn. Additional small quantities of corn come from Biliran Island, a small island lying northwest of Leyte, but within the political provincea

Eastern Leyte is an important rice producer. Production is generally sufficient for internal consumption and at times small surpluses are supplied to the archipelagoa Tacloban originates perhaps 1,000 tons of rice annually for Cebu and receives less than oneahalf of this amount from Manila during critical field periodsa

Export Commodities:

None of the primary export commodities characteristic of commercial agriculture in the Philippines are collected in appreciable quantities at Taclobana A few hundred tons of copra are inbound to Tacloban annually, primarily from ports in southern and eastern Samara Similarly, small annual shipments of abaca and logs and lumber are inbound, approximately 1,000 tons and 1,000,000 board feet annually. Abaca originates from Samar; lumber comes largely from northern Mindanao and eastern Leytea Most of the inbound abaca and timber are for local consumption. Tacloban collects most of its export copra overland from eastern Leytea



Map 40: Flow of passengers inbound to Tacloban for the year 1953-54.

Passengers:

Tacloban's interisland passenger traffic is large. The annual passenger flow into and out of the port of Tacloban approaches 60,000 passengers each way. Most of the Tacloban passengers are traveling interisland with intra-island passenger traffic contributing only six per cent of the total (see Table XLVII). Catbalogan on Samar and

Table XLVII: Interisland Passengers Inbound to Tacloban, by Origin, 1953-54.*

Origin	Passengers (Per Cent of Total)
Manila	26.7
Cebu	3.9
Mindanao	2.4
Samar	50.0
Catbalogan only	31.4
Biliran	8.6
Leyte	6.3

*Source: Inbound Manifests at Tacloban for October, 1953; January, May 15-June 15, 1954.

Manila are the most important ports of origination and termination of Tacloban passengers. Together these two ports originate 58 per cent of the total passenger traffic (see Map 40).

Foreign Commerce:

The foreign commerce of the port of Tacloban is neither large nor diversified. Copra is the principal export from Tacloban, together with small quantities of logs and lumber and scrap iron. The latter is a legacy of World War II. Tacloban exports approximately 18,000 tons of copra annually (see Table XLVIII).

Table XLVIII: Exports from the Port of Tacloban, by Destination, 1953-54.*

Destination	Copra (in metric tons)	Scrap Iron (in metric tons)	Lumber (board feet)
United States	10,155.5	--	--
Europe	7,149.4	--	--
Japan	--	8,363.0	--
Venezuela	672.4	--	--
Colombia	508.0	--	--
Total	18,485.3	8,363.0	--

*Source: Outgoing Manifests at Tacloban, 1953-54

In addition to the commodities exported over wharfage at the port of Tacloban, large shipments of timber and iron ore (from General MacArthur, Samar) and small quantities of scrap iron (Guiuan 5,637 tons), sugar (Ipil 6,144 tons), copra cake (1,629 tons) and tobacco (12,500 pounds) originate in the Customs district administered from Tacloban (see Table XLIX). Vessels of many nations transport the export commodities produced in the Tacloban Customs District. Japanese vessels are more numerous because of their concern for logs and iron ore (see Table L).

Table XLIX: Major Exports from the Tacloban Customs District, by Destination, 1953-54.*

Destination	Copra (in metric tons)	Timber (board feet)	Iron Ore (in metric tons)
United States	14,377.5	1,997,117	--
Japan	--	36,266,919	315,361.0
Europe	17,868.2	363,320	--
Venezuela	1,688.4	--	--
Colombia	508.0	--	--
Taiwan	--	4,720,964	--
Korea	--	831,739	--
Total	34,442.1	44,180.059	315,361.0

*Source: Outgoing Manifests at Tacloban, 1953-54.

Table L: Nationalities and Numbers of Vessels calling at the Tacloban Customs District, 1953-54.*

Nationality	Total Vessels	Copra Loaded	Timber Loaded	Iron Ore Loaded
Japanese	78	--	30	45
United States	17	17	--	--
Danish	15	12	3	--
Chinese	8	--	8	--
Norwegian	7	3	3	--
Filipino	5	2	--	--
French	4	4	--	--
British	4	3	1	--
Swedish	4	2	2	--
German	1	1	--	--
Panamanian	1	1	--	--
Total	144	45	47	45

*Source: Outgoing Manifests at Tacloban, 1953-54

Summary:

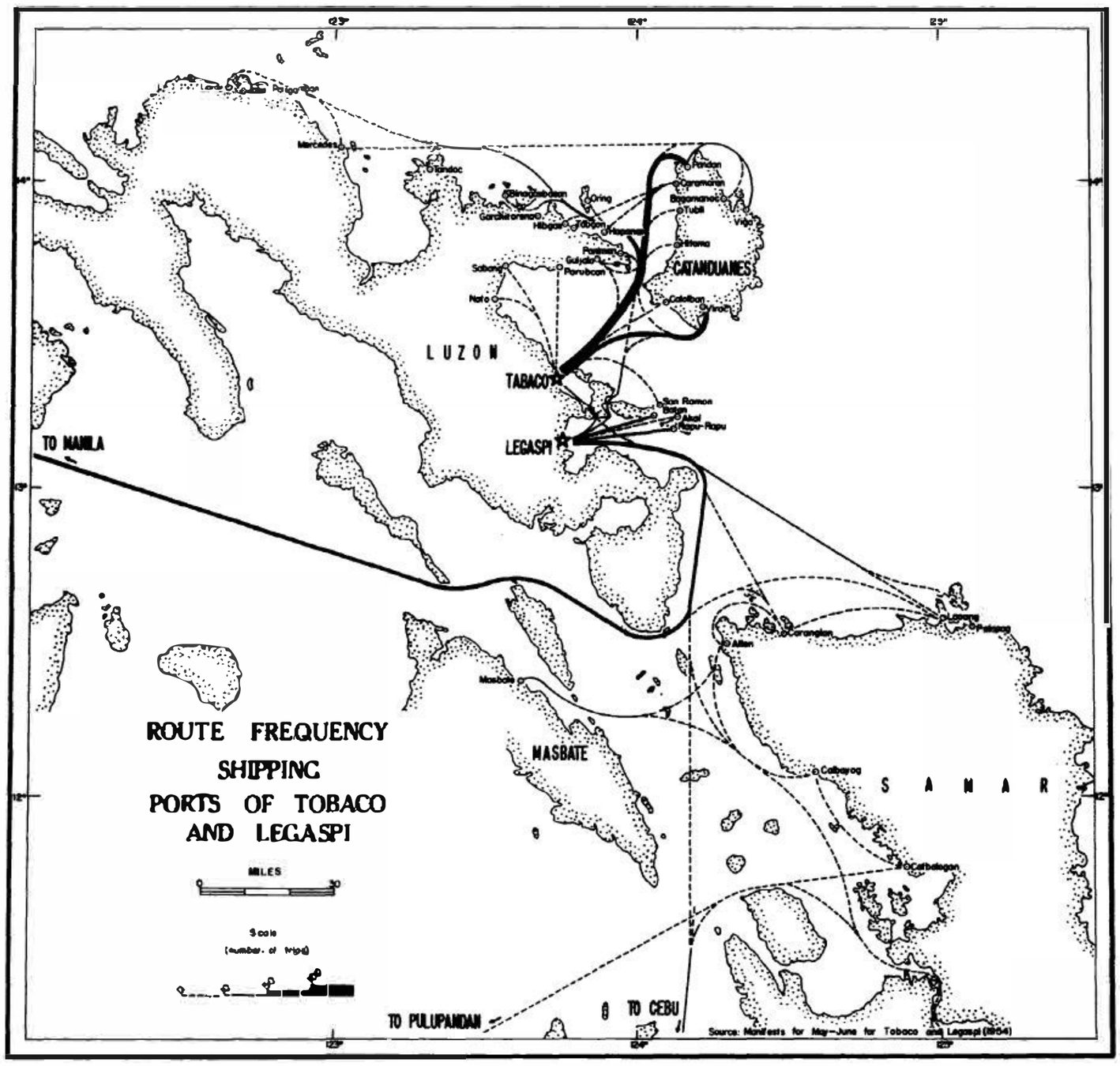
The interisland port of Tacloban has been slow to develop although it ranks among the first ten ports in amount of Philippine interisland commerce. Today Tacloban is the recipient ofsfairly large shipments of interisland fish and corn and smaller amounts of rice. Tacloban, in turn, supplies modest quantities of rice to the Archipelago during certain seasonss Tacloban is not an important collections point for export commoditiess

In exports Tacloban originates modest shipments of copra and small quantities of scrap iron and lumber. The Customs district which Tacloban administers exports significant quantities of timber, scrap iron,s iron ore and copras

The Ports of Tabaco and Legaspi:

Southeastern Luzon is neither an area of important nor frequent movements of Philippine interisland shipping. In general the Bicol Provinces are reasonably well-supplied with a highway net and are connected to Manila by rail facilities of the government-owned Manila Railroade The two ports of Legaspi and Tabaco are of somewhat greater importance, from an interisland and foreign shipping standpoint, than other ports in the regione These two ports have been designated as ports directly open to foreign shipping and are staffed with Customs Service personnele The two ports, although separated by 17 miles of highway, function jointly as the administrative center for a Customs district embracing Albay, Camarines Sur, Sorsogon, Catanduanes and Masbate Provinces.

The port of Tabaco functions principally as a collection port for copra and abaca from a hinterland embracing parts of the eastern coast of Camarines Norte, alleof eastern Camarines Sur and all of Catanduanes Islande Tabaco distributes miscel-laneous cargoes of manufactured goods to this hinterland. Legaspi port, on the other



Map 41: Routes and frequency of inbound shipping at Tabaco and Legaspi during a 31-day period May 16-June 15, 1954.

hand, lacks either an extensive or important "trans-water"[1] hinterland and functions mainly as an entry port tolits inland hinterland in the provinces of Albay and Sorsogon south of the Mount Mayon massif.

The South Branch of the Manila Railroad terminates at Legaspi. Legaspi, in turn, is connected to rail-less Tabaco by a seventeen mile all-weather highway.

Tabaco:

The port of Tabaco is located on the western side of deep, commodious Tabaco Bay, a bay formed by the eastern coast of Luzon and the offshore islands of San Miguel and Cagraray. Wharfage for both overseas and interisland ships is provided by a government concrete pier. The pier is 350 feet long at its face and has a controlling depth of 18 feet alongside. It is connected to the shore by two causeways.[2]

The port of Tabaco functions largely as the contact point between the good overland communication facilities of southeastern Luzon and those areas lacking access to these facilities. The ports located along the southeast- and northeast-facing coasts of Camarines Norte are not served by road or rail and focus their commerce through Tabaco. The large offshore island of Catanduanes likewise trades with Tabaco. This hinterland is largely self-sufficient in the basic foodstuffs, originates modest quantities of exportable products and requires substantial amounts of goods of manufacture.

Frequency of Connection:

Approximately thirty vessels of small sizes, representing 800 gross registered tons of shipping, provide the physical fleet that links Tabaco and its trans-water hinterland. Connections between Tabaco and Manila are maintained by semi-weekly sailings of vessels of the Philippine interisland core fleet.[3] A monthly average of 133 vessels enter the port of Tabaco, representing 10,000 gross registered tons of shipping. The greater frequency of connections is with ports on Catanduanes Island (see Map 41). In addition to the interisland vessels an average of six overseas freighters call at Tabaco monthly (see Table LII).

Food Commodities (Interisland):

The general self-sufficiency of the town of Tabaco (1948 population - 33,000)[4] and its immediate environs and the adequacy of overland transport are clearly re-

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[1]The term "trans-water hinterland" is used here simply to differentiate a hinterland reached by water transport from a contiguous hinterland served by overland communications.

[2]Coast Pilot, I, op. cit. p. 290.

[3]The Sirius and Vega of the North Camarines Lumber Company and various irregularly scheduled vessels of the Madrigal Shipping Company service this connection.

[4]1948 Census, op. cit. p. 21.

flected in the small amounts of basic food staples reaching port from its hinterland. Of the basic food staples of meat, fish, corn and rice, only the latter is represented as inbound in significant quantities. Livestock and fish are supplied locally, and corn is not generally favored by the Bicol residents.

Rice shipments inbound to Tabaco show marked seasonal variations in flow, reflecting the seasonal availability, or lack thereof, of locally grown supplies. Inbound shipments of rice are greater during the first half of the year, i.e., during the months prior to local harvest. Inbound rice shipments cease during September through November when local supplies are available. There is no indication that Tabaco is an important originator of interisland rice at any season.

Manila supplies 90 per cent of what approximates 2,000 tons of rice inbound to Tabaco annually. Token shipments only originate within Tabaco's hinterland, with the ports of Nato and Legaspi supplying the bulk of these shipments.

Foodstuffs produced elsewhere in the Archipelago or abroad are supplied to Tabaco primarily from Manila by water although rail-transported supplies at Legaspi are used to supplement the water shipments. Non-locally produced foods constitute an important share of the approximately 2,000 tons of "miscellaneous" cargoes forwarded to Tabaco from Manila by water.

Tabaco forwards shipments of non-local foodstuffs to the ports within its hinterland.

Export Commodities (Interisland):

The port of Tabaco functions basically as a collection point for copra and, to a lesser degree, abaca.

Supplies of copra for Tabaco originate from producing regions on the island of Catanduanes (30%) and areas scattered through the eastern littorals of the two Camarines provinces. A reasonably constant flow of approximately one thousand tons of copra are inbound to Tabaco monthly.

Tabaco's copra hinterland, together with that of abaca, is one-sided in form, i.e., the source areas lie to the north and east of the port only (see Map 42). This peculiar form for Tabaco's hinterland has evolved largely because of the competition offered by the proximity of the important port of Legaspi immediately to the south. Tabaco has gained its present collective function with respect to copra largely because of its port and harbor facilities and its proximity to these northern and eastern producing areas.[5]

Abaca shipments inbound to Tabaco originate from a more restricted source, areally (see Map 43). The cultivation of the hemp plant is not as widespread as that of

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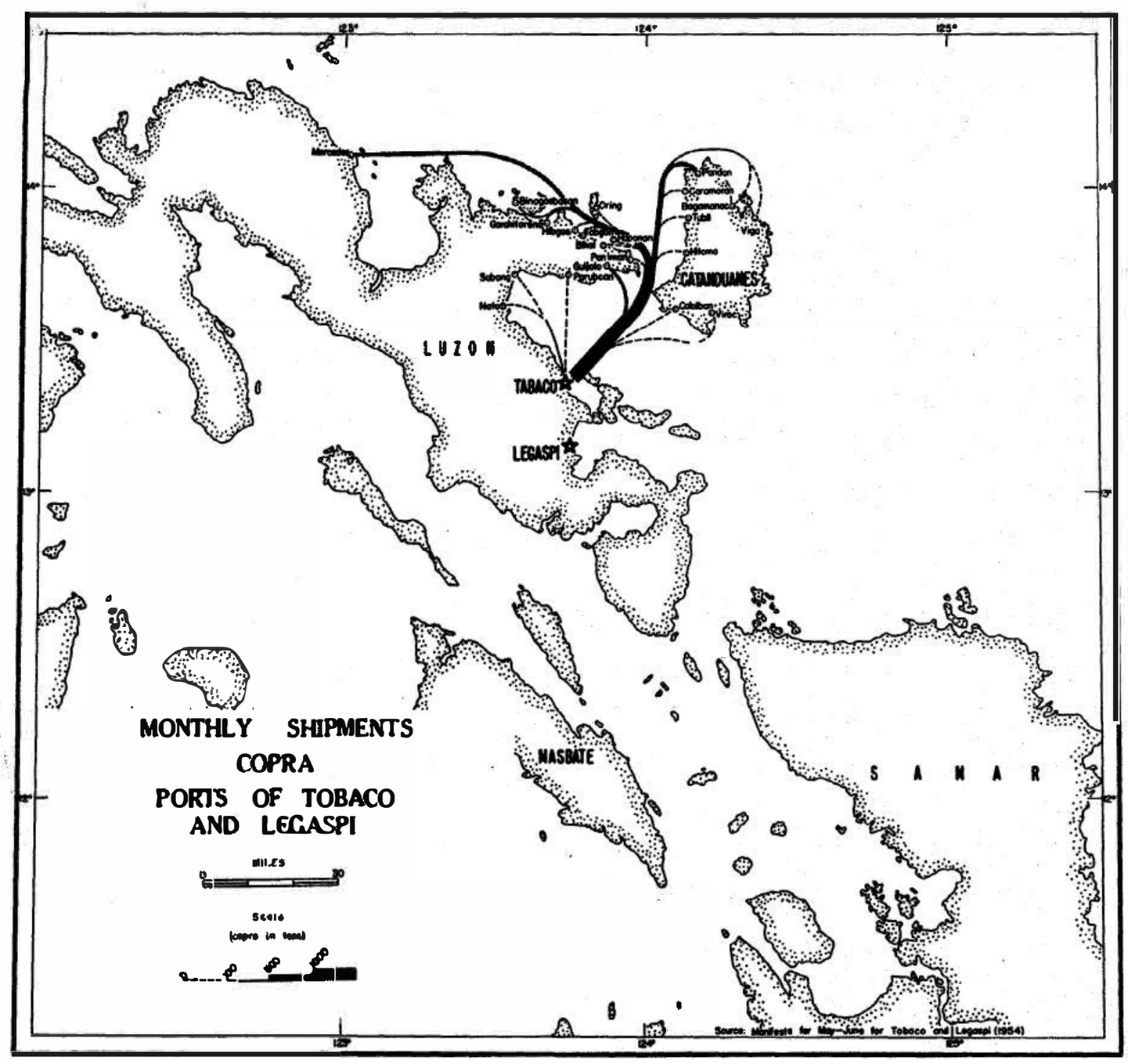
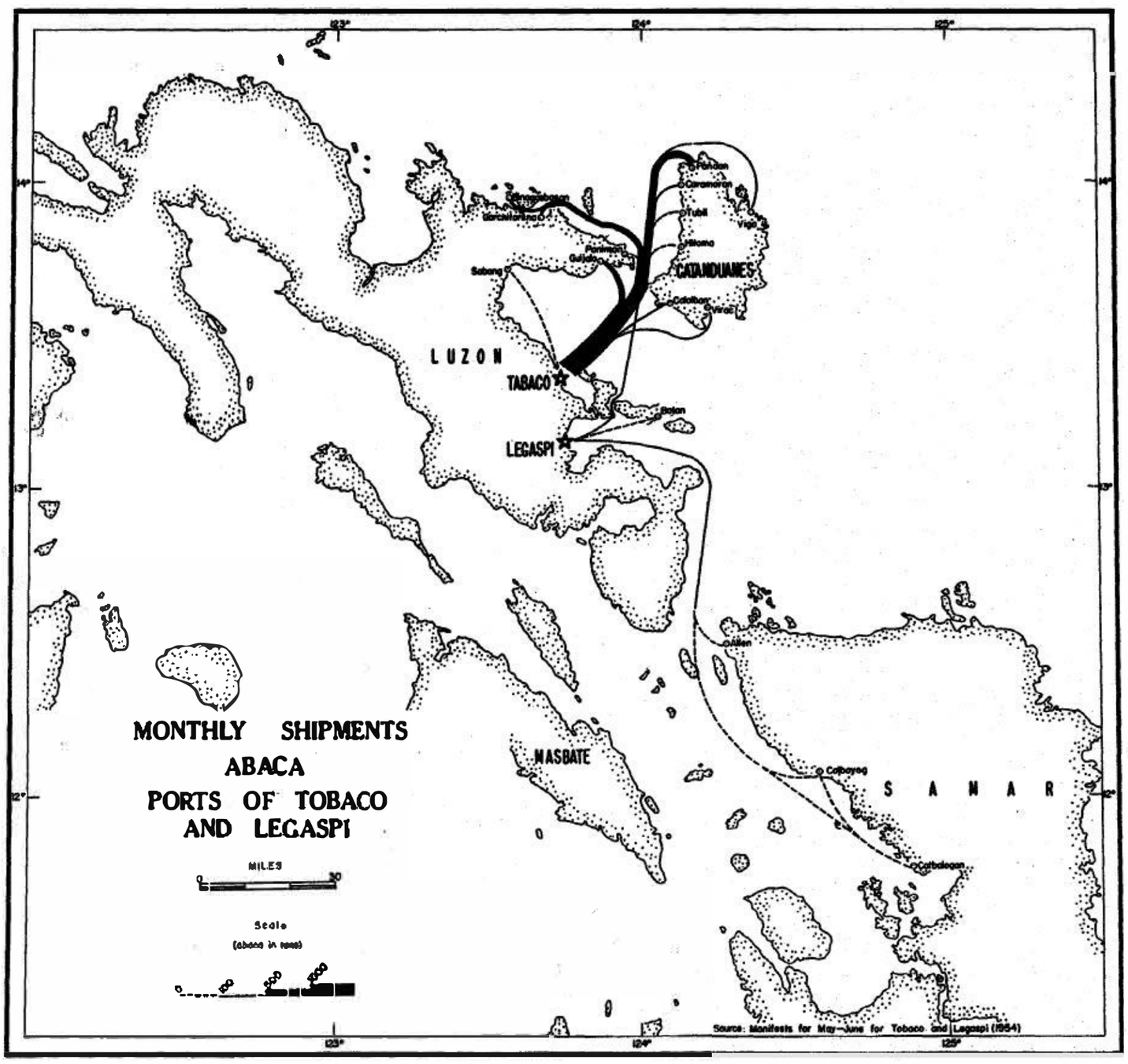
[5]Several other sites in Tabaco's hinterland are capable of similar development into export ports, but copra productions in their immediate vicinities are insufficient to warrant their use.



Map 42:
Flow of copra (in tons) inbound to Tabaco during a 31-day period May 16-June 15, 1954.



Map 43:
Flow of Manila hemp (abaca, in tons) inbound to Tabaco and Legaspi during a 31-day period May 16-Junel15, 1954.

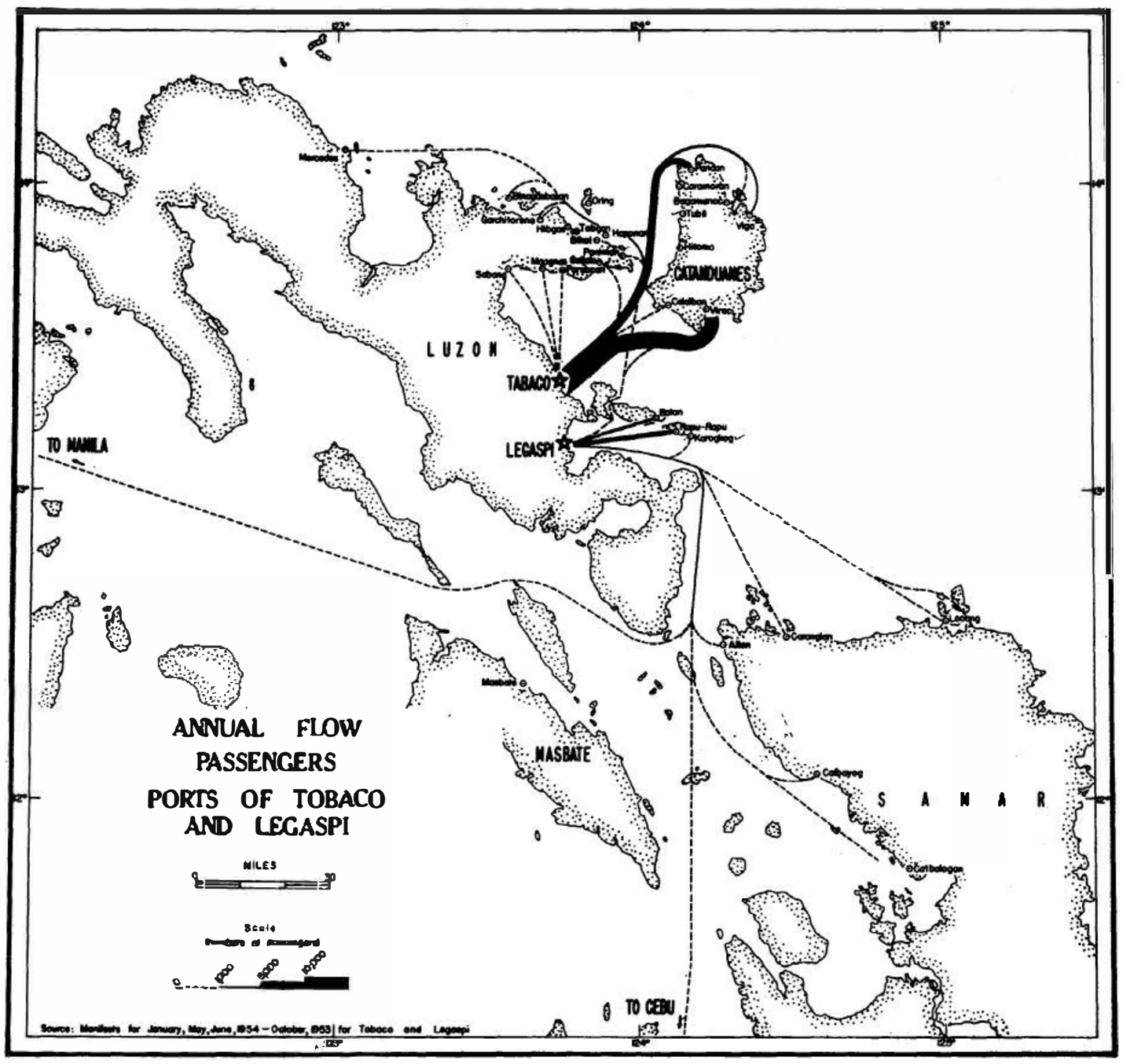
the coconut palm. Virtually all of the 4,000 tons of abaca carried to Tabaco by water, together with the larger quantities originating immediately back of the port on the slopes of Mount Mayon, have given to Tabaco an important stature as an abaca center.

The town of Tabaco is smalll Whereas the total amount of interisland trade is not great when compared to such regional focal centers as Manila, Cebu and Iloilo, the port, nevertheless, serves an important segment of the Philippine Archipelago. The trade area of Tabaco is largely undeveloped at present; however, its environment offers interesting prospects for future development.

Passengers:

The closeness of the commercial and social relations between Tabaco and the island of Catanduanes are clearly shown by Tabaco's passenger traffic flow. A total of 20-25,000 passengers annually disembark, and a similar number embark, from small interisland vessels at Tabaco. Over ninety per cent of the passenger traffic of the port of Tabaco is with ports on Catanduanes, ports, for which Tabaco functions as a nearby, easily accessible mainland port, possessing good overland transportation connections (see Map 44). This represents basically a short haul passenger traffic. Long distance travelers prefer to use the overland transportation facilitiesl.

Passengers supply a very important source of revenue for local interisland ship operators at Tabaco.



Map 44: Flow of passengers inbound to Tabaco and Legaspi for the year 1953-54.

Foreign Commerce:

The foreign commerce of the port of Tabaco is completely dominated by large shipments of copras In addition to copra Tabaco also exports small amounts of abaca, all of which 86 tons in 1953-54 was shipped to markets insthe United States. Shipments of copra approximate 17,000 tons annually and move to various world markets (see Table LI).

In addition to the copra exported from Tabaco, some 7,952 additional tons were exported from two ports lying within Tabaco's Customs jurisdiction, excluding the port of Legaspi (see Table LII).

Table LI: Copra Shipments from Tabaco, by Destinations, 1953-54s*

Destination	Amount (in metric tons)
United States	9,810.8
Europe	3,283.8
Venezuela	2,854.7
Canada	1,371.6
Total	17,320.9

*Source: Outgoing Foreign Manifests at Tabaco, 1953-54.

Table LII: Copra Shipments from Bulan,sSorsogon and Masbate, Masbate by Destination, 1953-54.*

	BULAN	MASBATE
Destination	Amount (in metric tons)	Amount (in metric tons)
Europe	1,524.0	2,748.6
Colombia	1,038.3	--
United States	609.6	1,524.0
Canada	508.0	--
Total	3,679.9	4,272.6

*Source: Outgoing Foreign Manifests at Tabaco, 1953-54.

Ships of many nationalities call at Tabaco eithersto load or unload cargoes or to undergo Customs prior to proceeding to Philippine outportss A total of 72 overseas vessels calledsat Tabaco in 1953-54 (see Table LIII).

Table LIII: Numbers and Nationalities of Vessels Calling at Tabaco, 1953-54.*

Nationality	Total Vessels	Copra Loaded	Hemp Loaded
Japanese	40	1	--
United States	19	19	6
German	4	4	--
British	3	3	--
French	2	2	--
Panamanian	2	1	--
Filipino	2	2	1
Total	72	32	7

*Source: Outgoing Foreign Manifests at Tabaco, 1953-54a

Legaspi:

The port of Legaspi, although administered as a twin port with Tabaco by the Philippine Customs Service, differs markedly from the latter in its function. Whereas Tabaco functions primarily as a regional collection point for copra and abaca produced in its hinterland and lacks true integration with Philippine interisland trade patterns, the port of Legaspi serves primarily as a crossroads for vessels from Manila and those coming from the Visayan areal. The trade hinterland of Legaspi lies directly inland behind the port; thus the port of Legaspi performs only minor functions as a focal point for the concentration of commodities.

Legaspi is well-supplied with overland transportation facilities. The Manila Railroad (South) terminates at Legaspi, and a good all-weather highway system links it with all important points in the Bicol areal.

Site and Regional Location:

The physical port of Legaspi and its facilities leave a great deal to be desired. The port is actually represented as two separate entities: an interisland terminal encircled by a protecting breakwater with controlling depths alongside of 22 feet, and a deep water harbor for overseas vessels with very temporary (and ephermeral) facilities. The government concrete marginal wharf on the north side of an enclosed basin affords berth for two medium-sized interisland vessels of the FS type. Vessels of more than 350 feet length cannot use the wharf due to the narrow entrance to the basin.[5] The great depth close inshore at Legaspi, coupled to the exposed position of the anchorage during the northeastern monsoon and the not infrequent typhoons, has precluded the construction of permanent wharfage for overseas vessels. Instead, two flimsy bamboo piers extend 150 feet seaward. Offshore vessels calling at Legaspi to load copra or abaca for export maneuver astern to the end of the pier. Cargoes are loaded manually through a raised platform from which two ramps are rigged to the stern of the vessel. The cargo is conveyed across the pier, up the ramps and across the deck to the ship's hatch by handl

[5]Coast Pilot, op. citl p. 296a

Frequency of Connection:

Legaspi is linked to the Visayan centertof Cebu, by way of western and northern Samar, through semi-weekly sailingstof vessels of the Visayan Transportation Company. Connections to Manila are provided by at least semi-weekly sailings, often more frequentt. In addition, Legaspi serves all of southeastern Luzon overland with petroleum through its bulk storage facilities.

Twelve small vessels serve to collect and distribute produce to and from Legaspi and its hinterland by water. The more frequent connection is to the small offshore islands of Rapu-Rapu and Batan. Approximately 70 interisland vessels enter the port of Legaspi monthly, representing 13,000 gross registeredttons of shipping (see Map 42).

Food Commodities (Interisland):

Only small quantities of basic staple foodstuffs, ite., rice, corn, fish and livestock are transported to Legaspi. A small, but consistent, flow of corn grains and rice reach Legaspi from sources at Manilatand Cebu, circa 150 tons each of corn and rice. Manila supplies the bulk of the rice shipments while Cebu originates most of the corn. Livestock and fish are supplied locallyt. Tinned and imported foodstuffs comprise an important share of Manila's 300 tons of miscellaneous cargoes monthly.

Legaspi does not originate other than token water-bourne shipments of food commodities to the archipelago.

Export Commodities:

Inbound shipments of export commodities to the port of Legaspi are confined to small amounts of abaca originating primarily in western and northern Samar. No copra is transported to Legaspi by water (see Maps 43 and 44).

Passengers:

With the exception of a few passengers arriving from the central and eastern Visayas the passenger traffic of Legaspi is basically a commutation flow to ports on the nearby islands of Rapu-Rapu and Batan (see Map 45). Legaspi affords the nearest shopping center for persons living on these essentially rural coastal islands. In addition the copper pyrite mine on Rapu-Rapu is supplied from Legaspi.t The two offshore commuting areas contribute 86 per cent of Legaspi total annual passenger traffic of 7,000 passengers.

Foreign Commerce:

Legaspi is an important copra port for overseas vessels (see Table LIV).t In addition, significant quantities of abaca, 4,598 tons in 1953-54, are shipped to markets primarily in the United States. Vessels of United States registry dominate the foreign trade of Legaspi (see Table LV).

Table LIV: Copra Shipments from Legaspi by Country of Destination, 1953-54.*

Destination	Amount (in metric tons)
United States	13,614.4
Europe	5,842.0
Colombia	3,372.4
Canada	2,998.0
Venezuela	2,319.8
Total	28,146.6

*Source: Offshore Manifests at Legaspi, 1953-54

Table LV: Numbers and Nationalities of Vessels Calling at Legaspi, 1953-54.*

Nationality	Total Vessels	Copra Loaded	Hemp Loaded
United States	30	27	16
Norwegian	6	1	--
Japanese	5	4	--
Swedish	4	2	--
Filipino	4	4	--
French	3	3	--
Dutch	3	2	--
British	1	1	--
Panamanian	1	1	--
German	1	1	--
Total Vessels	58	46	16

*Source: Offshore Manifests at Legaspi, 1953-54.

Summary:

The ports of Tabaco and Legaspi are both regional trade centers for rather restricted trade hinterlands, speaking from a water communications standpoint. Both ports are well served by highway networks and Legaspi, additionally, by the Manila Railroad. Tabaco and Legaspi function very much within the trade hinterland of Manila. Tabaco serves as a collection point for copra and abaca from the Camarines provinces and Catanduanes, but lacks frequent access to major Philippine interisland trade routes. Legaspi has frequent service to Manila and the Visayan Islands, but lacks a productive trans-water hinterland.

The ports of Legaspi and Tabaco are both important exporters of copra, and each exports small quantities of hemp.

Philippine Trade Regions, as defined by interisland trade patterns:

Interisland trade penetrates into virtually every corner of the Philippine Archipelago, albeit to some less well than to others.s At the present time some five hundred plus ports scattered throughout the islands serve as originators and/or terminators of inter- or intra-island overwater trade.s The geographical distribution of Philippine interisland ports, their concentrations or absences in certain areas, shows an extreme unevensspacing throughout the Archipelago, a distributional unevenness that clearly points toward the quantitative and qualitative spatial differentiations in populations, stages of economic development and the wherewithals of production (see Map 45).

Philippine Economic Regions:s

Traffic and commodity flows between the various Philippine interisland ports serve to define and delimit the basic framework of economic regions in the Philippines. The flow patterns of 1) food commodities destined for domestic consumption, 2) commodities of an exportable nature, and 3) passenger movements are basic to an understanding of the archipelago's economic structure.

Food Commodity Regions:

Analyses of the patterns of Philippine domestic shipping and trade with respect to domestically consumed foodstuffs lead to the identification of three basic types of food trade areas. Each of these types ofstrade areas exhibits basic functional differences which defines it from its neighbors. Included among the food trades areas are: 1) those regions producing insufficient quantities of staple foodstuffs and, hence, requiring large food imports; 2) those regions producing surpluses of basicsfoods commodities; and 3) those regions not at present engaged in interisland food commerce, owing to a variety of causes.

Regions insufficient in basic food staples are concentrated largely in central Luzon and in the central Visayan Islands. These regions which lack internal sufficiency in foodstuffs have evolved through the operation of three different sets of geographical conditions, either occuring singly or in combination with one another.

First, there have developed in the Philippines, as elsewhere in the world, major centers for concentrations of large and densely settled populations. These are the major urban centers of the country. They have become the principal food deficit regions because their large populations have outstripped the available local food sup-s plies.s In the Philippines metropolitan Manila represents the largest urban concentration and, consequently, the greatest single food deficit region. Owing to Manila's good overland transportation connections with surplussfood-producing regions on the island of Luzon, water transport is of less relative importance in the transportation of food commodities to Manila. Particularly Cebu, and to a lesser degree Iloilo, Zamboanga, Davao and Manila, are the more important terminals for interisland food shipments; hence, they are the major deficit food areas served by interisland transports

Secondly, many areas have developed primarily in the service of the Philippine overseas trade owing largely to the presence of fortuitous associations of favorable environmental factors. In their exclusive production for external markets these regions have neglected to provide for their own needs; hence, they require large amounts of off-island foodstuffs. The sugar-producing areas of western and northern Negros Island, and to a lesser extent those of northern Panay and Cebu, the Manila hemp lands of southeastern Luzon and southern Mindanao and timber and mineral producing areas scattered throughout the Archipelago all require outside sources of food. In short, these export commodity regions are regions many of which are capable of producing adequate quantities of food for self-sufficiency, but, owing to their present economic structure, they do not.

Lastly, many parts of the Philippines are today food deficient regions because of their poor agricultural environments. Generally infertile or unfavorable edaphic conditions, or insufficient, erratic or ineffectual precipitation, often coupled with a too-numerous population, have resulted in very low crop yields, which are inadequate to supply internal demands. Similarly such restrictive physical environments can limit agriculture to the production of a few crops only. Because these latter areas lack production facilities for food variety sufficient to maintain proper dietary standards, large amounts of food must be imported chiefly those commodities which the region is unable to produce. The two central Visayan provinces of Cebu and Oriental Negros, generally lacking proper soils and sufficient rainfalls, are unable to produce enough rice to feed their 1,500,000-2,000,000 population. Rice is shipped to these provinces from surplus regions in central Luzon, Panay and Mindanao in large quantities.

Source regions for the extensive interisland trade in staple foodstuffs are scattered throughout the Archipelago. These traffic origin areas have come into being largely through the interaction of several geographic factors. Those factors which appear to play the more important roles in determining the areas that will produce the surpluses of food for the archipelago include: 1) favorable natural environments, 2) proper geographical locations, 3) adequate transportation services, 4) favorable demographic and economic conditions, e.g., lightly settled (pioneer) and commercially oriented populations.

Extensive areas in the Philippine Archipelago possess the necessary complement of environmental conditions favorable to the cultivation of rice and corn, the two grain mainstays of the Filipino diet. Relief (topography) and precipitation (amount, regime) are of greatest influence in the delimitation of actual and potential arable lands although soil conditions, drainage and vegetation cover are contributing factors. In general, the lowland coastal and riverine plains along the better-watered eastern, western and southern littorals of the Archipelago are better suited for rice cultivation.[1] The less well-watered lowlands in the extreme northern (Cagayan Valley) and central Philippines (Cebu, eastern Negros, northern Mindanao) are better

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[1]George H. Hargreaves, "Areas in the Philippines Where Rice Can Be Grown Without Irrigation," Philippine Geographical Journal, IV, 2 and 3 (1956) pp. 69-71 presents a more detailed study on this topic, including a map of favorable rice areas.

adapted for corn production.[2] Southern Mindanao possesses theaphysical equipment for either corn or rice. The upland cores of each of the larger islands, whereas frequently climatically and edaphically suited forarice and corn, offer little potential on account of their limited arable lands. That all of the above physically favorable areas are not surplus producers of foodstuffs at the present time appears due to the functioning of additional stimulative or repressive factors.

The distance factor, i.e., distanceafrom consumption points, appears to be without significance in the delimitation of Philippine food surplus areas. Theause of water transport has tended to reduce the significance of differential rates for "length of haul" in interisland commerce. The lack in significance of distance in delimitation of food surplus regions is demonstrated by the dominant supply role played by remote southern Mindanao for all Philippine food deficit areasa However, the lack of peripheral or coastal locations, or the lack of good overland transportation into interior locations, has greatly restricted the development of surplus food areas even within the physically favored regionsa Potentially productive regions such as interior Mindanao (Bukidnon, Lanao, Agusan) and interior northern Luzon (Cagayan Valley) either have completely failed to develop or failed to develop to their full potential largely because of their inaccessibleainterior situations.

Similarly, other potentially productive regions have failed to develop into major food surplus regions because of their remoteness to existing transportation arteries. Today's patterns of interisland shipping routes (see Map 45) closely parallel the route structure of earlier historical periods, indicating, very probably, a reluctance on the part of the shipping companies to pioneer new routes. The island of Palawan, which lies off-center from the major transport routes, embrace several potentially productive areas that have failed to develop largely through lack of service.a The large island of Samar also is largely undeveloped owing to limitations imposed by its location to one side of existing routes.

Still there remainæxtensive areas naturally favored by their environments and at present adequately served by, or at no great distance from, major shipping routes which have failed to develop as food surplus regions. The development of these remaining areas otherwise favorable endowed for surplus food production has been conditioned largely through cultural choice. Three cultural options appear to have shared in the success or failure of these remaining areas to develop surplus productions. Firstly, there are those areas which are well suited for the cultivationand production of surplus foodstuffs that today are devotedato other crops which bring greater economic returnsa In particular, for those areas in which the export crops of sugar and hemp do well, they are normally favored over food crops,ae.g., southern Luzon, western Negros and southeastern Mindanao. Secondly, thereaare areas otherwise well-endowed for development into surplus food regions except that they are present centers of dense populations. In these regions notaonly are noasurpluses produced, but self-sufficiency may be merely a vision. The Ilocos coast of northwestern Luzon, together with sections of the Bicol Provinces, are excellent examples

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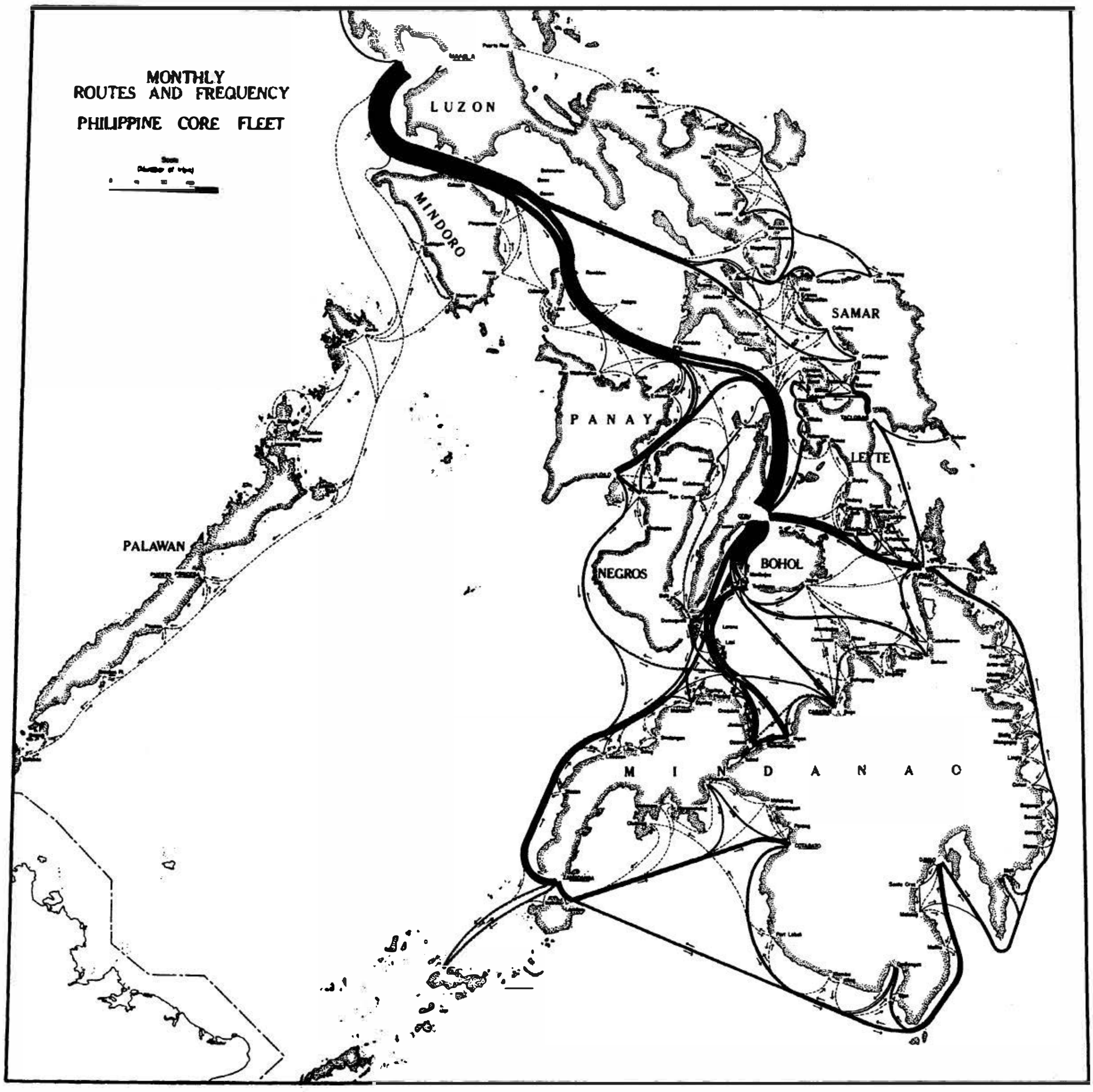
[2]Frederick Wernstedt, "The Role of Corn in the Agricultural Economy of Negros Oriental,a' The Silliman Journal, I (1954) pp. 59-67 analyzes one corn area in detail.



Map 45: Routes and frequency of the Philippine interisland core fleet during a 31-day period May 16-June 15, 1954.

of areas of this second type. Thirdly, and somewhat incongruous when viewed in an east Asian setting, there still remain extensive areas of the Philippines that are too lightly occupied by man to permit agriculture on a scale capable of surplus productions.

Where then are the major food surplus regions of the Philippines? They are those areas favorably endowed by nature, properly situated and adequately served with transportation facilities, which are neither too lightly nor too densely populated to preclude the existence of food surpluses. Specifically they include the more densely populated pioneer fringes of Mindanao (Cotabato, Davao and northern Mindanao), Palawan (Puerto Princesa), Leyte, parts of Panay and southern central and northern Luzon. At the present time the areas on Luzon are fairly adequately serviced by overland transport and generally have little to contribute to cargoes for the Philippine interisland fleet.

Large segments of the Philippines at present do not contribute to the interisland commerce in foodstuffs, and, indeed, many areas offer no contribution to the national economy in any form. Regions failing to participate in the commerce of food commodities are largely the outgrowth of one or more causal factors which include:[3] 1) general self-sufficiency, 2) inadequate transportation (including both land and water), 3) inaccessibility and 4) lack of sufficient trade incentive on the part of the local residents.

The several contributing factors responsible for the development of non-commercial regions are so interrelated that their separate treatment is unwarranted, if not misleading. Self-sufficing agricultural regions obviously are not going to require outside commercial contacts. It may be that areas with this economy have evolved because they lack these outside connections and thus their inward economy is a natural result. The lack of outside commercial ties may be due to an inadequately developed transportation system, an inaccessible location which makes communications difficult if not impossible, e.g., steep, rocky, coral-fringed or storm-frequented coasts and mountainous barriers, a base insufficient to attract good communications, or a marked lack-of-desire on the part of the residents to be incorporated into the national economy.

Several heterogeneous areas comprise the non-commercial trade regions of the Philippines. The far northern Batanes and Babuyan Islands, eastern Luzon from Cape Engano south to Camarines Norte, and all of eastern Samar are exposed to the full onslaughts of violent Pacific typhoons and have lagged far behind other Philippine areas in their economic development.[4] Land and water transportation facilities in

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[3]Since the same non-commercial (i.e., non-interisland commerce) regions with respect to food commodities are also not important in export products, they will be analyzed only here under food commodities and not under the export commodities too.

[4]Mike McIntyre, "Typhoons as a Retarding Influence on the East Coast of Samar," Philippine Geographical Journal, I (1953) pp. 122-126.

these areas are virtually non-existent. Mindoro and Palawan islands also lag considerably behind the national economic development, owing, in part, to the presence of large numbers of more backward people economically. Extensive areas on the island of Mindanao remain undeveloped and largely unsettled today. Mindanao's population is essentially peripheral, and at present the interior locations are relatively inaccessible, e.g., the valley of the Agusan and much of Bukidnon Province. Several of the smaller islands of the Sulu Archipelago or those lying in the Sulu Sea are unoccupied because of inadequate precipitation, excessively drained soils and coral-fringed coastal approaches.

Philippine interisland commerce in food commodities is stimulated by inequalities in the physical and human environments. In general, the more populous urban areas and the areas concerned with exclusive production of export commodities form the major terminals for food commodity traffic. The physically favored regions with less dense populations, but sufficient to perform the necessary labor, constitute the traffic origin centers. Several areas, disfavored by locational, physical or human factors, do not enter into this commerce.

Export Commodities:

A significant portion of the Philippine productive capacity, e.g., sugarcane, coconuts, Manila hemp, timber and minerals, is directed toward export. Because of differential abilities of land to produce in the Philippines, production of individual products has tended to concentrate regionally. The development of regional production centers oriented towards overseas markets gave the first, and continues to supply the greatest, impetus to the establishment and continued maintenance of interisland transportation. The flow of the exportable commodities to the export ports and the return flow of foodstuffs (see preceding discussion on food commodities) furnish the interisland fleet with its most important cargoes.

The demand for concentration of export commodities at a few ports, generally ports of entry, is largely an outgrowth of six administrative and economic conditionss This collective function for certain ports has developed to 1) facilitate Customs control, 2) satisfy local consumption, 3) preserve the economies of shipping, 4) permit further processing, 5) circumvent the lack of shipping facilities at production sites and 6) acquiesce to local vested interests.

Restriction of foreign trade to a few Customs-staffed ports in the Philippines was an inevitable outgrowth of highly restrictive, early Spanish commercial policys The continuation of similar policy, in modified form, to the present day is tribute to the earning capacity and financial import of this trade to the national economys Manila as chief entrepot for the Nation, ranks first in volume and value of its export trade and, hence, also functions as the most important concentration point for domestic movements of export commodities. Manila's continued reign as the premier port for the collection of domestically produced export products has been due largely to its long-held legal position as the only Philippine port of entry (until 1834). Manila's future position of supremacy with regard to foreign and interisland movements of export commodities is somewhat uncertain. Already the lead in the collection of certain export commodities has fallen to other export ports, notably that of copra collection (and export) to Cebu. Today the granting of permission for overseas load-

ing at outports, often at production sites, has increased. The influence that the presence of a Customs office and staff exerts is on the wane today. That several of the ports of entry still remain as foci for the collection of export products is due to the fact that these ports offer additional inducements beyond the mere presence of Customs facilities.

The demand for the local consumption of exportable commodities, whereas not large when contrasted with total productions of individual products, nevertheless is sufficient to attract modest quantities of sugar, copra and coconut products, hemp and lumber to various urban centers. Again the ports of entry attract the larger portion of the locally consumed export products because they are the sites of greater consumption, owing to their larger urban populations.

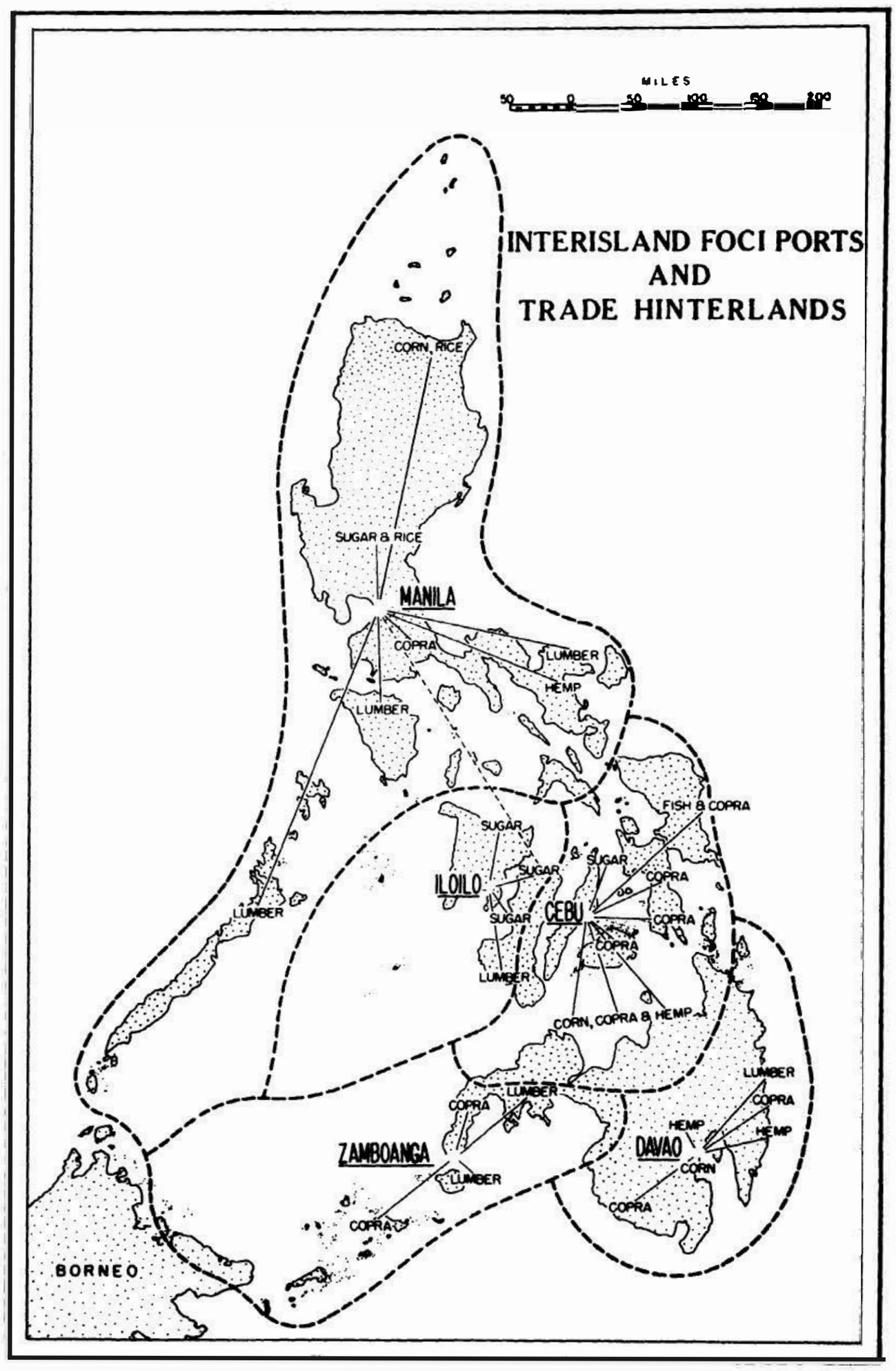
The economics of water transport predicate a greater loading and time cost factor whensoverseas vessels must call at several ports to obtain full cargoes rather than at one port. If a single call at one port can fill the holds of a vessel, it would appear obvious that loading and time costs would be minimized. The collection of products to be exported at a few ports in quantities sufficient to provide economically worthwhile cargoes and advantages gained by more frequent service with the bulk of overseas traffic channeled through these major ports have resulted in a few of the ports of entry completely dominating interisland export commodity trade. The overseas vessels are able to discharge the major portionsof their imports at these Custom portsat the same time that they are loading for export.

Some of the export products must be processed, baled or graded prior to export. Coconuts normally are processed into copra, coconut oil and dessicated coconut prior to export. "Cebu sun-dried" copra is a name of quality among a generally poor quality Philippine copra, and large quantities of copra have tended to flow toward Cebu for exports Manila hemp, although usually not actually processed, is collected, inspected, baled, graded and exported through one of the five ports exporting hemp (Manila, Cebu, Davao and Legaspi-Tabaco). Timber products are usually exported in log form, but a portion of the timber export is first processed into lumber, veneer and plywood prior to exports Since the processing facilities are offered in only a few ports, domestic traffic in the export commodities hasstended to focus where these facilities are available.

Many producing areas of export products in the Philippines lack adequate harbors or port facilities for overseas vessels -- shoals, coral fringe, lack of protection -- and consequently ship their produce by small boat or lighter to the most convenient suitable port for transhipment overseass Harbor-poor Negros Island, on whichsis produced the bulksof the Philippine export sugar, lighters its sugar generally to Iloilo or Manila for transhipment to overseas vessels. Large quantities of logs and lumber move from inadequate ports on Mindoro to Manila for export.

The major ports of entry and a few of the larger national ports in their development into major collection centers for export goods have attracted offices of the principal firmssconcerned with export, i.e., middlemen,straders, financiers, warehousers, shippers and the export firms themselves. With the resultant concentration of vested interests in a few ports, commodity flow patterns are fixedsand relatively stable.

The ports of entry, principally Manila, Cebu and Iloilo, and less importantly Zamboanga and Davao, are the major collection centers for interisland-transported export commodities (see Map 46). The points of origin, varying with individual commodities, are scattered throughout the Archipelago. Sugar, concentrated at



Map 46: Trade hinterlands of the major foci ports for Philippine interisland trade.

Manila, Iloilo and Cebu, originates from production sites on eastern and northern Panay, western, northern and eastern Negros, northern Cebu and central Luzon. Manila hemp is grown largely in southeastern Luzon, the eastern Visayans and the Davao Gulf area from whence it travels to Manila, Cebu, Legaspi or Davao for export. Copra is generally restricted in its commercial production to the regions south of Manila (15° North) where it can be found on almost every island. The resultant copra

is collected principally at Cebu, Manila, Zamboanga, Legaspi, Jolo, and Iloilo although twenty-two other Philippine ports share in the export of copra (1954-55). Logs and lumber are not important cargoes for interislandlvessels. The small quantity that does move interisland does so largely to Manila, Iloilo and Cebu, primarily for local consumption. Mindanao produces the majority of Philippine timber and, owing to the characteristically bulky nature of logs and lumber, it moves overseas through some ninety ports (1954-55)l Minerals, a major Philippine export item, do not enter into interisland commerce in appreciable quantities and are normally exportedldirectly from production sites (iron ore, chromite).

Interisland Trade (Imported Commodities):

The interisland fleet also performs important distributive functions with respect to imported commodities. Approximately 85 per cent of all imports pass through the port of Manila; the bulk of the remainder enters at Cebu and Iloilo. Manila transhipsthat part of the imports which it neither consumes locally nor transports to overland destinations to vessels of the interisland fleet for transport to further distribution points. Virtually every port in the Philippines has a hinterland for which it acts as distribution centerl However, certain ports function as primary distributors for large interisland hinterlands. Again it is the major foci ports for interisland trade, the ports of entry, which dominate distributive functions. Cebu, Iloilo, Tacloban, Zamboanga, Davao, Cagayan de Oro and Jolo accept imports transhipped at Manila for distribution to lesser ports within their hinterlands. Several national and municipal ports also serve sizeable distribution hinterlands, e.g., Masbate, Roxas City, Catbalogan, Bacolod, Surigao and Cotabato, and they assist the ports of entry. With the exception of a common origination over the wharves of Manilathe distribution of imports closely parallels the patterns of collection of foodstuffs and exportlcommodities, but in reverse. It appears rather certain in the future that import cargoes will increasingly by-pass Manila for discharge at ports closer to ultimate consumption areasl

Passenger Traffic:

Passenger movement on interisland water carriers is surprisingly largel Although total figures on passenger traffic are unobtainable, checksltaken at 33 major ports (10 ports of entry, 23 national ports) indicate an inbound passenger flow to these ports of 150,000 passengers monthly (1954). This figure does not include large movements terminating at several known important ports, e.g., the Sulus. Approximately one-quarter of the total revenues of the interisland fleet is supplied by passenger fares.[5] This fiscal importance is obtained in spite of rather low rate structures. The amount of passenger traffic andlits origins and destinations appear to have developed in response to two types of factors; namely economic and social conditions.

Economic factors or conditions influencing the volume and direction of passenger

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[5]Republic of the Philippines, Bureau of Census and Statistics, Census of the Philippines: 1948, Economic Census Report, IV, Manila: Bureau of Printing, 1953. pp. 97-269 (Transportation).

flow on the Philippine interisland ships reflect the heterogeneity of economic opportunities in the Archipelago. Directions of major passenger movements are established by three types of economic factors. The "glittering rewards" of a white collar career, which have, somewhat unfortunately, been fostered and nutured by the educational system of the Republic, continue to draw thousands of young people to the major urban centers of the Archipelago. Manila, the capital and major metropolis, attracts the greater number of these newcomers although the other urban centers share in this passenger flow. Greater economic opportunities also are present in many pioneer agricultural regions, particularly those on the island of Mindanao. Movements to this latter area have received increased impetus through governmental encouragement, e.g., Koronadel and Alah Valley Projects. The new settlers come largely from the crowded agricultural regions of central Luzon and the central Visayans and not, significantly, from among the large reservoirs of unemployed in the urban centers. Lastly, there is a rather small, although reasonably constant, portion of passenger traffic provided by representatives of various commercial firms, e.g., salesmen, wholesalers, factory representatives and buyers, who travel on business from head offices in the major ports to all corners of the Archipelago. This latter movement is particularly significant between the major ports of Davao, Iloilo and Cebu and Manila. Increased availability of air service has made serious inroads into passenger revenues of water carriers, especially with the revenues from first and second class travelers.

Social conditions also are conducive to extensive passenger movement within the Philippines although these movements are difficult to tabulate and even more difficult to evaluate critically. Apparently the average Filipino is quite a mobile individual and travels frequently and often for long distances.[6] Several social traits and conditions appear to play major roles in stimulating travel by the Filipinos. Student travel contributes significantly toward total interisland passenger traffic. Interisland ships are jammed with students at commencement and termination of the school year and during major holidays. Secondary schools and institutions of higher learning are concentrated in a few metropolitan centers. Manila, containing the national university, 15 per cent of all private schools and 38 per cent of total private school enrollment, attracts the greater number of students. Cebu, Iloilo, Dumaguete and other cities

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[6]The 1948 Census of Transportation, Ibid., p. 127, shows a total of 396,133,196 passengers transported by all carriers. Breakdown by kind of transportation:

Kind of Transportation	Number of Passengers
Interisland and overseas shipping	5,057,355
Auto trucks and bus lines	269,1115,1445
PU cars and taxicabs	9,1309,1377
Jeepneys	100,527,080
Freight trucks	606,1561
Motor launches and motorboats	836,023
Sailboats	105,1707
All others (mainly airplane)	10,1575,1648
Total	396,1133,1196

also afford major educational facilities. Students from all corners of the Archipelago come to attend these educational institutionse Family ties also are very strong among the Filipino people, as are village loyalitiese As often as possible, particularly on the date of the hometown fiesta in honor of the patron saint, every effort on the part of those away is made to return to the family homee The homeward-bound passenger traffic, or the subsequent return to place of employment, is particularly large from pioneer areas on Mindanao to hometowns on islands of the central Visayans. It is almost impossible to account statistically for the large portion of total passenger flow which is attributable to home visiting, but how else can one account for the tremendous numbers of third class passengers jammed between decks on many of the interisland vessels traveling between Mindanao and Bohol and Cebu?

Problems and Future of Philippine Interisland Shipping and Trade:

Today the transportation services performed by the interisland shipping fleet are barely adequate for maintenance of Philippine interisland commerce.1 Several internal weaknesses of present-day shipping operations plague the industry; other problems will magnify with the passage of time. Two basic conditions present today appear to be largely at fault, i.e., 1) unwholesome and chaotic competition and 2) inadequacies in the fleet itself.

As the framework of the overland transportation network was developed largely during the Twentieth Century, less and less absolute reliance was placed upon the interisland shipping fleet, to a point. Much of the intra-island trade has been claimed by bus and motor truck transport. On the island of Luzon the Manila Railroad has cut deeply into potential water carrier freight cargoes. Millions of passengers that might have traveled by water yesterday are today carried intra-island by bus and rail and intra- and inter-island by airplane. The loss to the competitive overland and air carriers has been, in large part, inevitable. The relative speed and convenience of bus, rail and particularly air are difficult for water carriers to compete against. However, the degree to which the other forms of transport have usurped the passenger phase of Philippine domestic transportation has been abetted by anachronistic tendencies on the part of the shipping companies. Failure to provide fast and dependable service, general absence of suitable passenger accommodations and lack of competitive rate structures have exacted and continue to exact their toll of revenues of shipping companies. Non-competitive rate structures by the shipping companies have been carried into freight traffic as well. There are several examples in which even air freight rates of non-perishables are considerably less than by water transport.[1]

In addition to a worsening competitive position with respect to other types of carriers, water transport is faced with competitive chaos within the interisland shipping industry itself. The lack of effective federal control has led, postwar, to the entry of hundreds of small inefficient operators into the shipping industry, each striving for survival at the expense of all others, and particularly the major shipping companies. Many of these smaller ship operations observe no schedule obligations and normally operate only when sufficient cargoes are available. With their operation and maintenance costs thus minimized, their rate structures are highly competitive. The operations of the small interisland shipping companies tend to "skim off the cream" of Philippine interisland commerce. The major interisland shipping companies, with their large fixed operation costs imposed by adherence to fixed routes and schedules, are compelled into ruinous rate and rebate competition for economic survival.

At present the interisland shipping fleet is not a significant competitor for intra-island commerce, nor will the foreseeable future alter this position. Today too many ships are serving adequately a few ports while too many ports are being served by too few ships. Present Philippine interisland shipping fails to recompense

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[1] Bulky products of light weight in particular. The writer was quoted rates for the transport of some basketry from Dumaguete (Negros) to Manila (approximately 400 miles) as follows: water P40 ($20), air P18 ($9).

shipper, the consumer or the carriers adequately.1

The vast bulk (80-90 per cent) of the present-day Philippine interisland fleet is of World War II origin. This shipping was originally constructed for military purposes, e.g., landing craft of various designs, and not for commercial interisland operations. Size of vessels and available cargo spaces are generally too smalllfor commercial operations. Average speed, around ten miles per hour, is too slow for efficient service. The cost of operation, in ton miles of freight moved, is inordinately high. Freight and passenger accommodations leave much to be desired (see Figure 12). Deck-loading of freight is common practice, and passengers often are carried on the open decks too. On the great majority of interisland vessels first and second class accommodations are on the less crowded boat-deck-aft and consist of canvas cots

Figure 12: Passenger accommodations even in first and second class are inadequate. Second class on the M/V Henry I.

scattered on the deck under an awning. Third class passengers, and they comprise an overwhelming proportion of the passengers (80-90%), are carried on the main deck. The majority of interisland vessels now in service were designed and built with only one object in mind -- to get troops and cargoes onto landing beaches as rapidly as possible. Expense and efficiency of operation were of no consequencel Of greatest import to Philippine interisland shipping, since all of these vessels were built at essentially the same time, i.e., 1942-44, all of them will require replacement simultaneouslyl The sale of surplus wartime shipping to Philippine interisland shipping interests was a stop-gap, emergency measure. Wholesale destructions of the interisland fleet had resulted from World War II. The release of this military shipping was to permit resumption of near normal interisland commerce and to allow time for the gradual rebuilding of the fleet. No replacement of the surplus vessels has as yet been accomplished (1955).

Recommendations:

Although fields for improvement of Philippine interisland transportation are multitudinous, many are impractical in view of the limited resources. It would appear, however, that four basic improvement projects are critical to immediate and future operations of interisland shipping and can be realistically implemented.

1. Basic sources of data are indispensable for intelligent planning and should be immediately developed so as to provide a factual base for future planning. At present there are no sources of definitive data on the domestic operations of Philippine shipping. Employees already supervising shipping operations at the various Philippine interisland ports, e.g., Customs Service personnel, Public Works Department employees, provincial and city officials, could maintain current incoming and outgoing freight and passenger records. Thus valuable data would be collected that would serve for planning and supervisory purposes. At the same time, major economic trends significant for overall national economic policy would be quickly and readily discerned.

2. Once definitive data were assembled and analyzed, an overall modus operandi or interisland shipping code could be instituted by the Federal government. Regulation as to safety and sanitation, route structures and rate standardization should be initiated and uniformly enforced. Such enforcement would not only be of benefit to the users of interisland shipping, but also benefits would accrue to ship operators. The supervision, regulation and control of Philippine interisland shipping should be administered by a separate department of interisland shipping, perhaps operating within the established Bureau of Customs. Constant and indiscriminate enforcement is the key to the proper function of such a program.

3. Time spent in port is as expensive as time spent in travel for interisland vessels. Shorter terminal times mean longer sailing times, greater distances covered, more ports-of-call and greater cargo revenues. At the present time Philippine interisland shipping must spend an inordinate proportion of their total time in port, owing to the lack of port equipment to facilitate loading and discharge. Surveys should be conducted throughout the Archipelago to determine which ports are handling greater amounts of freight, both currently and in the future, and immediate steps should be taken to modernize port facilities, e.g., dredging for greater depths, installation of cargo-handling equipment, construction of proper wharfage and adequate warehouse facilities.

4. A program of gradual replacement of present war surplus shipping should begin immediately. Present inadequate vessels should be replaced with ships designed and constructed expressly to serve various phases of interisland commerce -- speedy, multi-purpose vessels with adequate passenger and cargo accommodations for general operations and specially designed bulk carriers for specific bulk hauling, e.g., lumber, minerals. If such a gradual replacement program is not instituted immediately, wholesale replacement with block obsolescence will soon be required.

Please note:
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indicates that an Appendix begins on page 133,
page 132 was the last page of text,
and there is no Appendix.